MDX-C8900R

SERVICE MANUAL

AEP Model
UK Model

Model Name Using Similar Mechanism	MDX-C7900R
Base Mechanism Type	MG-164KE-138
Optical Pick-Up Name	KMS-241B/J2N

SPECIFICATIONS

MD player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

General

Outputs	Line outputs (3) Power aerial relay control lead Power amplifier control lead Telephone ATT control lead Illumination control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 × 50 × 180 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 160 mm (w/h/d)
Mass	Approx. 1.5 kg
Supplied accessories	Rotary commander (1) Microphone (1) Parts for installation and connections (1 set) Front panel case (1)

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Design and specifications are subject to change without notice.

FM/MW/LW MINIDISC PLAYER

MICROFILM

SONY®

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

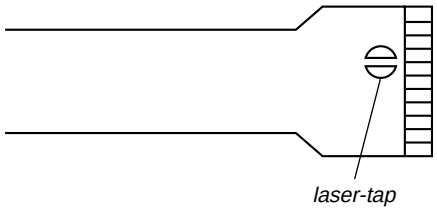
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right avove when checking it for adustment. It is feared that you will lose your sight.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241B/J2N).

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform m easures against electrostatic break-down sufficiently before the operation.
The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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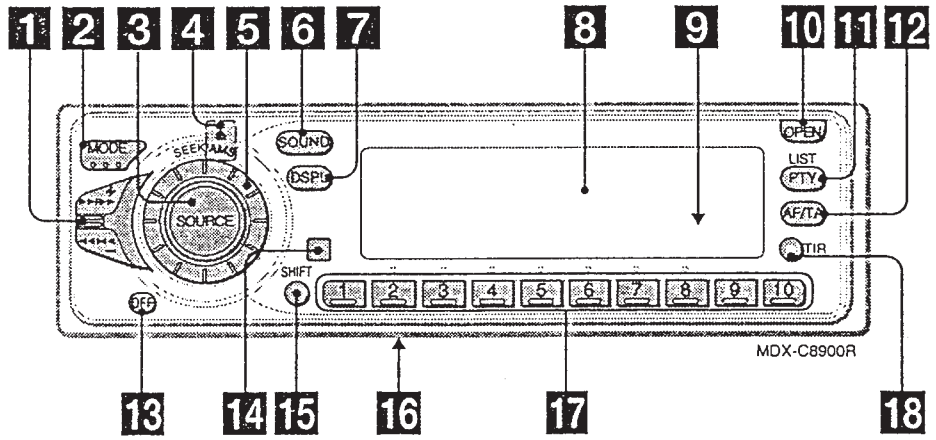
This section is extracted from instruction manual.

Location of controls



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Refer to the pages for details.

1 SEEK/AMS (seek/Automatic Music Sensor/manual search/voice drive/voice memo select) control
9, 11, 12, 14, 19, 20, 22, 24, 29, 30, 31, 34

2 MODE button 13, 14, 28, 30, 33

3 SOURCE (TUNER/CD/MD) button
8, 9, 13, 14, 17, 27, 28, 30, 33, 36, 38, 39

4 ⏏ (eject) button (located on the front side of the unit behind by the front panel) 8

5 Dial (volume/subwoofer volume/surround menu/listening position/bass/treble/left-right/rear-front control)
7, 18, 26, 32, 36, 37, 38, 39

6 SOUND button 26, 36, 37, 38, 39

7 DSPL (display mode change) button
9, 14, 15, 28, 33, 34

8 Display window

9 Reset button (located on the front side of the unit behind by the front panel) 6

10 OPEN button 6, 8, 41

11 PTY/LIST button
Disc Memo 32, 33
DSP Costom File 36
List-up 34
RDS Programme 20

12 AF/TA button 15, 16, 17, 18

13 OFF button 6, 8

14 Sensor for the optional wireless remote

15 SHIFT button
PLAY MODE 10, 11, 12, 13, 14, 16, 18, 29, 30, 31, 32, 34, 35, 36
REP 10, 29
SET UP 7, 9, 21, 27, 28, 39
SHUF 10, 29

16 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.

17 During radio reception:
Number buttons 14, 16, 19
During CD/MD playback:
Direct disc selection buttons 29, 30

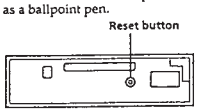
18 TIR button 18, 19

4

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ballpoint pen.



Note
Pressing the reset button will erase the clock and some memorised functions.

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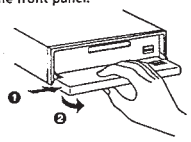
Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

1 Press (OFF).

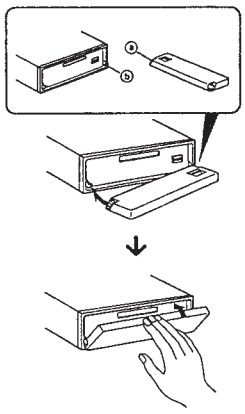
2 Press (OPEN) to open up the front panel, then slide the front panel to the right side, and pull out from the left side of the front panel.



Notes
- *Do not place anything on the inner surface of the front panel.*
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still on, the power will turn off automatically to prevent the speakers from being damaged.*
- *When you carry the front panel with you, put it in the supplied front panel case.*

Attaching the front panel

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.



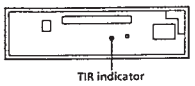
Notes
- *Be sure not to attach the front panel upside down.*
- *Do not press the front panel hard against the unit when attaching it. Press it lightly against the unit.*
- *Do not press hard or put excessive pressure on the display windows of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight where there may be a considerable rise in temperature.*

Caution alarm

If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position).

TIR indicator

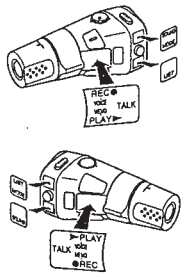
If you pull out the ignition key while the TIR function is on, the TIR indicator flashes a few times. (only when the POWER SELECT switch is set to the Ⓐ position).



For more information on the TIR function, refer to "Recording the traffic announcements" (page 18).

Preparing the rotary commander

When you mount the rotary commander, attach the labels as shown in the illustration below.

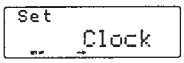


Setting the clock

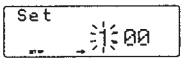
The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

1 Press (SHIFT), then press ③ (SET UP).



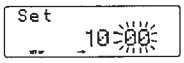
❶ Press ⑤ (→).



The hour digit flashes.

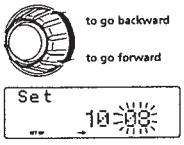
❷ Set the hour.

❸ Press ⑤ (→).



The minute digits flash.

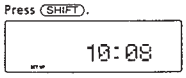
❹ Set the minute.



EN Getting Started

continue to next page →

2 Press (SHIFT).



The clock starts.

3 Press (SHIFT).
After the mode setting is complete, the display returns to normal playback mode.

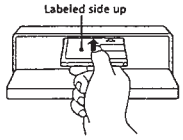
Note
If the POWER SELECT switch on the bottom of the unit is set to the Ⓑ position, turn the power on first, then set the clock.

EN

MD Player

Listening to an MD

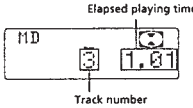
1 Press (OPEN) and insert an MD.
Playback starts automatically.



2 Close the front panel.

If an MD is already inserted, press (SOURCE) repeatedly until "MD" appears.

The title of the MD* and the track title will be displayed on the display window, then the playing time will appear.



** Only if these titles are prerecorded on the MD.*

Tip
If the name of the MD is too long, you can scroll it across the display window by pressing (SHIFT), then press ② (←) while the disc name or track name is displayed.

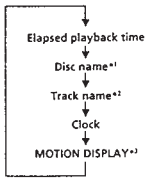
When the last track on the MD is over

the track number indication will return to "1," and the playback will restart from the first track of the MD.

To	Press
Stop playback	(OFF)
Eject the MD	(OPEN) then ⏏

Changing the display item

Each time you press (DSPL), the item changes as follows:



**1 If there is no prerecorded title for a disc "NO D.Name" will appear on the display.*
**2 If a track title is not prerecorded, "NO T.Name" will be displayed.*
**3 All the items above are scrolled in the display one by one in order.*

Automatically scrolling a disc name — Auto Scroll

If the disc name or track name on an MD exceeds 10 characters and the Auto Scroll function is on, the following automatically scrolls on the display:
- *The disc name appears when the disc has changed (if the disc name is selected).*
- *The track name appears when the track has changed (if the track name is selected).*
- *The disc or track name appears depending on the setting when you press (SOURCE) to select an MD.*

If you press (DSPL) to change the display item, the disc or track name of the MD is scrolled automatically whether you set the function on or off.

1 During playback, press (SHIFT).

2 Press ③ (SET UP) repeatedly until "A.Scrl" appears.

3 Press ⑤ (→) to select "A.Scrl on."

4 Press (SHIFT).

To cancel Auto Scroll, select "A.Scrl off" in step 3 above.

Locating a specific track — Automatic Music Sensor (AMS)

During playback, push the SEEK/AMS control up or down momentarily.

Locating a specific point in a track — Manual Search

During playback, push the SEEK/AMS control up or down and hold. Release when you have found the desired point.

Note
If "└ └ └ └" or "┐ ┐ ┐ ┐" appears in the display, it means you have reached the beginning or the end of the disc and you cannot go any further.

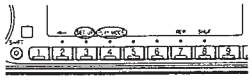
EN Getting Started/MD Player

Playing an MD in various modes

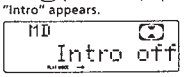
You can play MDs in various modes:
- Intro (Intro Scan) lets you play the first 10 seconds of all the tracks.
- Repeat (Repeat Play) repeats the current track.
- Shuf (Shuffle Play) plays all the tracks in random order.

Searching for the desired track
— Intro Scan

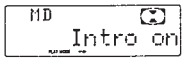
1 During playback, press (SHIFT).
Every time you press (SHIFT), only the items available for selection light up.



2 Press ④ (PLAY MODE) repeatedly until "Intro" appears.



3 Press ⑤ (→) to select "Intro on."



Intro Scan starts.

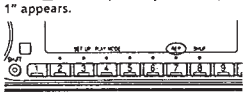
4 Press (SHIFT).

To return to the normal playback mode, select "Intro off" in step 3 above.

Playing tracks repeatedly
— Repeat Play

1 During playback, press (SHIFT).

2 Press ⑦ (REP) repeatedly until "Repeat 1" appears.



Repeat Play starts.

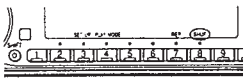
3 Press (SHIFT).

To return to the normal playback mode, select "Repeat off" in step 2 above.

Playing tracks in random order
— Shuffle Play

1 During playback, press (SHIFT).

2 Press ⑧ (SHUF) repeatedly until "Shuf 1" appears.



Shuffle Play starts.

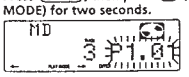
3 Press (SHIFT).

To return to the normal playback mode, select "Shuf off" in step 2 above.

Creating a programme
— MD Programme Memory

You can play the tracks in any order you want by creating and storing programmes in the unit's memory. You can make two programmes: Programme 1 and Programme 2. You can select up to 12 tracks for each programme. You can store the programmes in memory.

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.

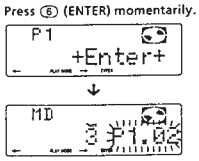


"P 1" indicates Programme 1 is selected.

To select Programme 2, press ⑤ (→) repeatedly until "P 2" appears.

2 Push the SEEK/AMS control up or down to select the track you want.

3 Press ⑥ (ENTER) momentarily.



4 To continue entering tracks, repeat steps 2 and 3.

5 When you finish selecting tracks, press ④ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Notes
- *"*Wait*" appears in the display while the unit is reading the data.*
- *"*Mem Full*" appears in the display when you try to enter more than 12 tracks into a programme.*

Playing the stored programme

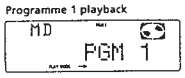
You can select:
- PGM 1 – to play Programme 1.
- PGM 2 – to play Programme 2.
- PGM 1+2 – to play Programmes 1 and 2.

1 Press (SHIFT).

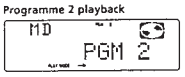
2 Press ④ (PLAY MODE) repeatedly until "PGM" appears.

3 Press ⑤ (→) repeatedly until the desired programme appears.

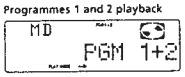
Programme 1 playback



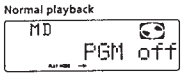
Programme 2 playback



Programmes 1 and 2 playback



Normal playback



Play starts in the selected programme play mode.

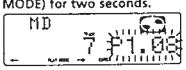
4 Press (SHIFT).

To return to normal playback mode, select "PGM off" in step 3 above.

Notes
- *"No data" appears in the display if no track is stored in the programme.*
- *"Not ready" appears in the display if a disc that has no programmed tracks is inserted.*

Erasing an entire programme

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.

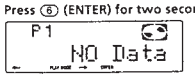


"P 1" indicates Programme 1 is selected.

2 Press ② (←) repeatedly until "DEL" appears.

To delete Programme 2, press ⑤ (→) repeatedly until "PGM 2" appears.

3 Press ⑥ (ENTER) for two seconds.



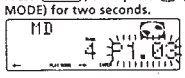
The entire programme is erased.

4 When you finish erasing programmes, press ④ (PLAY MODE) for two seconds.

5 Press (SHIFT).

Adding tracks to a programme

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.

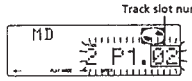


"P 1" indicates Programme 1 is selected.

To select Programme 2, press ⑤ (→) repeatedly until "P 2" appears.

2 Press ② (←) or ⑤ (→) to select the track slot number where you want to insert a track.

Track slot number



3 Push the SEEK/AMS control up or down to select the track you want to insert.

4 Press ⑥ (ENTER) momentarily to enter the track.
The current track is inserted in that slot number and the succeeding tracks shift down.

5 To continue inserting tracks, repeat steps 2 through 4.

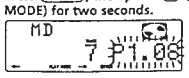
Note
*Once all 12 slots have been filled, "*Mem Full*" appears in the display, and you cannot insert more tracks.*

6 When you finish inserting tracks, press ④ (PLAY MODE) for two seconds.

7 Press (SHIFT).

Erasing tracks in a programme

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.

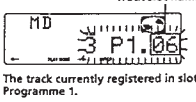


"P 1" indicates Programme 1 is selected.

To select Programme 2, press ⑤ (→) repeatedly until "P 2" appears.

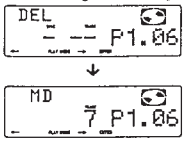
2 Press ② (←) or ⑤ (→) to select the track you want to erase.

Track slot number



The track currently registered in slot 6 of Programme 1.

3 Press ⑥ (ENTER) for two seconds.
When you erase a track from a slot number, the succeeding tracks shift up to fill the gap.



4 To continue erasing tracks, repeat steps 2 and 3.

5 When you finish erasing tracks, press ④ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Radio

Memorising stations automatically
— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals and memorises them in the order of their frequencies. You can store up to 10 stations on each band (FM1, FM2, MW, and LW).

Caution
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press (SOURCE) repeatedly to select the tuner.
Each time you press (SOURCE), the source changes as follows:
MD ⟷ TUNER

2 Press (MODE) repeatedly to select the band.
Each time you press (MODE), the band changes as follows:

→ FM1 → FM2 → MW → LW

3 Press (SHIFT), then press ④ (PLAY MODE) repeatedly until "B.T.M" appears.

4 Press ⑤ (→).
The unit stores stations in the order of their frequencies on the number buttons.
A beep sounds when the setting is stored.

5 Press (SHIFT).

Notes
- *The unit does not store stations with weak signals. If only a few stations are received, some number buttons will retain their former setting.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*

Memorising only the desired stations

You can preset up to 20 FM stations (10 for FM1 and 10 for FM2), and up to 10 MW stations, and up to 10 LW stations in the order of your choice.

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band (FM1, FM2, MW, or LW).

3 Push the SEEK/AMS control up or down to tune in the station you want to store on the number button.

4 Press and hold the desired number button (① to ⑩) until "MEM" appears.
The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased.

Receiving the memorised stations

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band (FM1, FM2, MW, or LW).

3 Press the number button (① to ⑩) momentarily where the desired station is stored.

If you cannot tune in a preset station

Push the SEEK/AMS control up or down momentarily to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Push the SEEK/AMS control up or down repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (SHIFT), then press ④ (PLAY MODE) repeatedly until "Local" (local seek mode) is displayed. Then press ⑤ (→) to select "Local on." Press (SHIFT). Only the stations with relatively strong signals will be tuned in.

Tip
If you know the frequency of the station you want to listen to, push the SEEK/AMS control up or down and hold until the desired frequency appears (manual tuning).

If FM stereo reception is poor
— Monaural Mode

1 Press (SHIFT), then press ④ (PLAY MODE) repeatedly until "Mono" appears.

2 Press ⑤ (→) repeatedly until "Mono on" appears.
The sound improves, but becomes monaural ("ST" disappears).

3 Press (SHIFT).

To return to normal mode, select "Mono off" in step 2 above.

Changing the display item

Each time you press (DSPL), the item changes as follows:

Frequency (Station Name)*1 → Clock → MOTION DISPLAY*2 → Frequency (Station Name)*1

*1 When you tune in an FM station that transmits RDS data, the station name appears.
*2 All the itmes above are scrolled in the display one by one in order.

RDS

Overview of the RDS function

Radio Data System (RDS) is a broadcasting service that allows FM stations to send additional digital information along with the regular radio programme signal. Your car stereo offers you a variety of services. Here are just a few: re-tuning the same programme automatically, listening to traffic announcements and locating a station by programme type.

Notes
- *Depending on the country or region, not all of the RDS functions are available.*
- *RDS may not work properly if the signal strength is weak or if the station you are tuned to is not transmitting RDS data.*

Displaying the station name

The name of the current station lights up in the display.

Select an FM station (page 13).
When you tune in an FM station that transmits RDS data, the station name appears in the display.

Note
The "" indication means that an RDS station is being received.*

Changing the display item

Each time you press (DSPL), the item changes as follows:

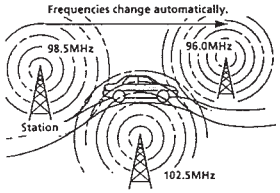
Station Name (Frequency) → Clock → MOTION DISPLAY* → Station Name (Frequency)

* *All the items above are scrolled in the display one by one in order.*

Note
"NO Name" appears if the received station does not transmit RDS data.

Re-tuning the same programme automatically
— Alternative Frequencies (AF)

The Alternative Frequencies (AF) function automatically selects and re-tunes the station with the strongest signal in a network. By using this function, you can continuously listen to the same programme during a long-distance drive without having to re-tune the station manually.



1 Select an FM station (page 13).

2 Press (AF/TA) repeatedly until "AF on" appears.
The unit starts searching for an alternative station with a stronger signal in the same network.

Note
When there is no alternative station in the area and you do not need to search for an alternative station, turn the AF function off by pressing (AF/TA) repeatedly until "AF TA off" appears.

Changing the display item

Each time you press (AF/TA), the item changes as follows:

AF on → TA on → AF TA on* → AF TA off → AF on

* *Select this to turn on both the AF and TA functions.*

Notes
- *"NO AF" and the station name flash alternately, if the unit cannot find an alternative station in the network.*
- *If the station name starts flashing after selecting a station with the AF function on, this indicates that no alternative frequency is available. Push the SEEK/AMS control up or down while the station name is flashing (within eight seconds). The unit starts searching for another frequency with the same PI (Programme Identification) data ("PI seek" appears and no sound is heard). If the unit cannot find another frequency, "NO PI" appears, and the unit returns to the originally selected frequency.*

Listening to a regional programme

The "REG on" (regional on) function lets you stay tuned to a regional programme without being switched to another regional station. (Note that you must turn the AF function on.) The unit is factory preset to "REG on," but if you want to turn off the function, do the following.

1 Press (SHIFT), then press ④ (PLAY MODE) repeatedly until "REG" appears.

2 Press ⑤ (→) repeatedly until "REG off" appears.

3 Press (SHIFT).
Note that selecting "REG off" might cause the unit to switch to another regional station within the same network.

To return to regional on, select "REG on" in step 2 above.

Note
This function does not work in the United Kingdom and in some other areas.

Local link function (United Kingdom only)

The Local Link function lets you select other local stations in the area, even if they are not stored on your number buttons.

1 Press a number button that has a local station stored on it.

2 Within five seconds, press the number button of the local station again.

3 Repeat this procedure until the desired local station is received.

Listening to traffic announcements

The Traffic Announcement (TA) and Traffic Programme (TP) data let you automatically tune in an FM station that is broadcasting traffic announcements even though you are listening to other programme sources.

Press (AF/TA) repeatedly until "TA on" or "AF TA on" appears.
The unit starts searching for traffic information stations. "TP" appears in the display when the unit finds a station broadcasting traffic announcements. When the traffic announcement starts, "TA" flashes. The flashing stops when the traffic announcement is over.

Tip
If the traffic announcement starts while you are listening to another programme source, the unit automatically switches to the announcement and goes back to the original source when the announcement is over.

Notes
- *"NO TP" flashes for five seconds if the received station does not broadcast traffic announcements. Then, the unit starts searching for a station that broadcasts traffic announcements.*
- *When "EON" appears with "TP" in the display, the current station makes use of broadcast traffic announcements by other stations in the same network.*
- *While the unit is receiving the traffic announcements, the voice drive function and voice memo function do not work.*

To cancel the current traffic announcement

Press (AF/TA) or (SOURCE) momentarily.
To cancel all traffic announcements, turn off the function by pressing (AF/TA) until "AF TA off" appears.

Presetting the volume of traffic announcements

You can preset the volume level of the traffic announcements beforehand so you won't miss the announcement. When a traffic announcement starts, the volume will be automatically adjusted to the preset level.

1 Select the desired volume level.

2 Press (AF/TA) for two seconds.
"TA" appears and the setting is stored.

Receiving emergency announcements

If an emergency announcement comes in while you are listening to the radio, the programme will automatically switch to the announcement. If you are listening to a source other than the radio, the emergency announcements will be heard if you set AF or TA to on. The unit will then automatically switch to these announcements no matter which source you are listening to at the time.

Presetting the RDS stations with the AF and TA data

When you preset RDS stations, the unit stores each station's data as well as its frequency, so you don't have to turn on the AF or TA function every time you tune in the preset station. You can select a different setting (AF, TA, or both) for individual preset station, or the same setting for all preset stations.

Presetting the same setting for all preset stations

1 Select an FM band (page 13).

2 Press (AF/TA) repeatedly to select either "AF on," "TA on" or "AF TA on" (for both AF and TA functions).
Note that selecting "AF TA off" stores not only RDS stations, but also non-RDS stations.

3 Press (SHIFT), then press (4) (PLAY MODE) repeatedly until "B.T.M" appears.

4 Press (5) (→) until "B.T.M" flashes.

5 Press (SHIFT).

Presetting different settings for each preset station

1 Select an FM band, and tune in the desired station.

2 Press (AF/TA) repeatedly to select either "AF on," "TA on" or "AF TA on" (for both AF and TA functions).

3 Press and hold the desired number button until "MEM" appears.
Repeat from step 1 to preset other stations.

Tip
If you want to change the preset AF and/or TA setting after you tune in the preset station, you can do so by turning the AF or TA function on or off.

Recording the traffic announcements

—Traffic Information Replay (TIR)

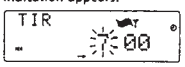
You can listen to the latest traffic announcements by recording them. The unit automatically records and stores up to eight traffic announcements. If the recording exceeds eight minutes, the recorded announcements are updated, so you can always hear the latest information.
The TIR function turns on the unit automatically and records the traffic announcements for up to two hours before and after a preset time.

Presetting the time and the station

1 Press and hold (TIR) until "TIR" lights up in the display.

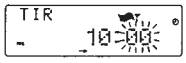
2 Press (5) (→) repeatedly until "TIR on" appears.

3 Press (TIR) repeatedly until the time indication appears.

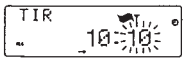


❶ Set the hour by rotating the dial.

❷ Press (5) (→) until the minute digits flash.



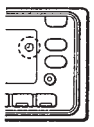
❸ Set the minute by rotating the dial.



4 Press (TIR).

5 Select the desired station by pressing the preset number button or pushing the SEEK/AMS control up or down.

6 Press (TIR) for two seconds to return to the original display.
◴ lights up.



The unit turns on automatically and stands by for traffic announcements for four hours (two hours before and after the preset time).
If the preset station does not broadcast the traffic announcement while searching, the unit starts searching for other traffic programme (TP) stations.

To cancel the TIR function

Select "TIR off" in step 2 above.

Tips
- *While the unit is recording the traffic announcement, ◴ and "TA" flash.*
- *If the unit still cannot find a TP station, it starts a new search every five minutes until it finds one.*
- *If you pull out the ignition key while the TIR function is on, "TIR on" and ◴ flash a few times.*

Notes
- *The unit also stands by for traffic announcements for two hours after you turn off the engine, as long as the TIR function is on.*
- *If you have a power aerial, it automatically extends every time the unit searches for a traffic programme station.*
If you have a manual aerial, make sure that the aerial is fully extended.
- *If you do not use your car for about ten days, the TIR function will turn off automatically to avoid battery wear, even if the TIR function is on.*
- *While the unit is recording or playing back the traffic announcements, the voice drive function and voice memo function do not work.*

Playing back the recorded traffic announcements

When there are recorded traffic announcements you have not listened to yet, ◴ flashes.

1 Press (TIR).
The latest traffic announcement is played back. To listen to the previous ones, press (TIR) or push the SEEK/AMS control up.
To replay the announcements, push the SEEK/AMS control down.
"NO Data" appears if no traffic announcements were recorded.

2 Press (TIR) to return to the original programme.

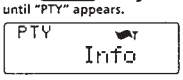
Locating a station by programme type

You can locate the station you want by selecting one of the programme types shown below.

Programme types	Display
News	News
Current Affairs	Affairs
Information	Info
Sports	Sport
Education	Educate
Drama	Drama
Culture	Culture
Science	Science
Varied	Varied
Popular Music	Pop M
Rock Music	Rock M
Middle of the Road Music	M.o.R.M
Light Classical	Light M
Classical	Classics
Other Music Type	Other M
Weather	Weather
Finance	Finance
Children's Programmes	Children
Social Affairs	Social A
Religion	Religion
Phone In	Phone In
Travel	Travel
Leisure	Leisure
Jazz Music	Jazz
Country Music	Country
National Music	Nation M
Oldies Music	Oldies
Folk Music	Folk M
Documentary	Document
Not specified	None

Note
You cannot use this function in some countries where no PTY (Programme Type selection) data is available.

1 Press (PTY/LIST) during FM reception until "PTY" appears.



The current programme type name appears if the station is transmitting the PTY data. "- - - - -" appears if the received station is not an RDS station, or if the RDS data has not been received.

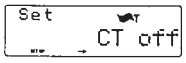
2 Press (PTY/LIST) repeatedly until the desired programme type appears.
The programme types appear in the order shown in the above table. Note that you cannot select "None" (Not specified) for searching.

3 Push the SEEK/AMS control up or down.
The unit starts searching for a station broadcasting the selected programme type. When the unit finds the programme, the programme type appears again for five seconds.
"NO" and the programme type appear alternately for five seconds if the unit cannot find the programme type. It then returns to the previous station.

Setting the clock automatically

The CT (Clock Time) data from the RDS transmission sets the clock automatically.

1 Press (SHIFT), then press (3) (SET UP) repeatedly until "CT" appears.



2 Press (5) (→) repeatedly until "CT on" appears.
The clock is set.

3 Press (SHIFT) to return to the normal display.

To cancel the CT function

Select "CT off" in step 2 above.

Notes
- *The CT function may not work even though an RDS station is being received.*
- *There might be a difference between the time set by the CT function and the actual time.*

Voice Drive

You can register an appropriate vocal phrase for any source including CD/MD*, and the radio station. Once the registration is completed, you can request that source just by pronouncing the registered vocal phrase for it towards the supplied microphone. This unit provides 12 "V Drive" boxes for accommodating registered phrases.

* *When you connect to a CDIMD changer with a PGM (Programme memory) function, you can request a disc in the CDIMD changer.*

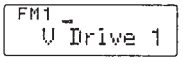
Use the rotary commander to control this function.

Note
While the unit is receiving, recording, or playing back the traffic announcements, the voice drive function does not work.

Selecting a "V Drive" box for registration

1 Play a CD or MD, or tune in a radio station that you wish to register a phrase for.

2 Press and hold (TALK) on the rotary commander until "V Drive" appears.

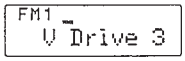


Note
When the unit enters the setting mode, the disc playback or the radio reception will be suspended.

Tip
If the "V Drive" box selected in step 2 already has a registered phrase, the source corresponding to it will be played or tuned in.

continue to next page →

3 Select a "V Drive" box for registration by adjusting the SEEK/AMS control either on the unit or the rotary commander.

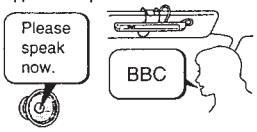


Tip
If you select an already registered box number, the registered source will be played or tuned in to.

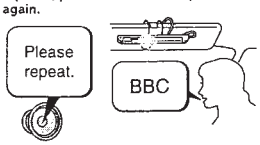
Registering a vocal phrase

1 Once all the steps of "Selecting a "V Drive" box for registration" are completed, press (TALK) on the rotary commander .

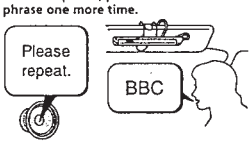
2 After you hear the unit's vocalized instruction "Please speak now.", pronounce a desired phrase toward the supplied microphone.



3 After the vocalized instruction "Please repeat.", pronounce the same phrase again.



4 After another vocalized instruction "Please repeat.", pronounce the same phrase one more time.



The unit records the vocal phrase in this step in order to identify the registered phrase later. When the unit answers "OK!", the registration is completed.

Notes
- *Do not attempt to register while driving, as this may create a traffic hazard.*
- *Be sure to reply after the unit's vocalized instruction.*
- *When a beep sound is heard, the registration failed. In this case, repeat the same process starting from step 1.*
- *Do not use phrases of similar pronunciation such as "Sony POPS 1" and "Sony POPS 2", because the unit may not be able to distinguish the difference.*
- *After you hear the unit's vocalized instruction, reply within three seconds.*

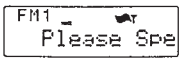
Tips
- *When you register the phrases, pronounce them clearly and loudly to make it easier for the unit to recognize them.*
- *Registration should be made while the car is parked with the engine running so that the unit will recognize your voice more easily when you are driving.*
- *Though the vocalized instructions are in English, any language can be used for registration.*
- *The volume of the vocalized instructions can be adjusted on the unit or by the rotary commander.*

EN

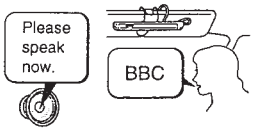
Requesting a registered source

You can request a registered source while listening to other sources or during the clock display.

1 Press (TALK) on the rotary commander.



2 After you hear the unit's vocalized instruction "Please speak now.", pronounce the registered phrase such as the disc name or the radio station.



3 When the unit successfully recognized the phrase;
The unit will play the disc or tune in the radio station.

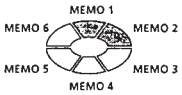
When the unit fails to recognize the phrase;
The unit replies "Please speak again."
In this case, repeat the same registered phrase.

Notes
- *When the unit fails to recognize the phrase three times, a beep sounds and the unit returns to the previous source. In this case, repeat the same process starting from step 1.*
- *If it is noisy outside the car, the unit may not recognize the registered phrase. In this case, close the window and try again.*
- *If you are far from the microphone, speak louder or come nearer to the microphone.*

Tips
- *If you do not reply within three seconds after the vocalized instruction, the unit replies "Please speak now."*
- *When you are requesting a registered source, pronounce clearly and loudly to make it easier for the unit to recognize.*
- *When the unit has difficulty recognizing the phrase, register the vocal phrase again.*

Voice Memo

Voice Memo is a function that allows you to record a voiced memorandum, such as the name of a song heard on a radio program or an idea which comes to mind. You can record up to six voice memos with this function. Note that each voice memo must be within 15 seconds.



You can record or play back the voice memo when listening to any source or during the clock display.

Use the rotary commander to control this function.

Note
While the unit is receiving, recording, or playing back the traffic announcements, the voice memo function does not work.

Recording a voice memo

1 Press (REC) on the rotary commander and voice your memorandum toward the supplied microphone.

2 The recording is completed by pressing (REC) again or leaving the unit untouched for 15 seconds.

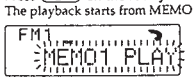
Notes
- *The voice memos are recorded as "MEMO 1", "MEMO 2", etc.,...in the order they are recorded.*
- *When a beep sounds and "MEMO FULL" appears, it means there is no room for additional voice memos. In such a case, erase the older recorded voice memos before recording new ones.*

EN

Voice Drive/Voice Memo

Playing back the voice memo

1 Press (PLAY) on the rotary commander.
The playback starts from MEMO 1.



2 Select the desired voice memo using the SEEK/AMS control.

3 Adjust the volume on the main unit or by using the rotary commander.
The unit automatically returns to the previous source after playing back all of the voice memos.

To interrupt the playback of a voice memo

Press (PLAY) on the rotary commander.
Playback stops and the unit automatically returns to the previous source.

Erasing the voice memo

1 Play back the voice memo to be erased.

2 Press and hold (PLAY) on the rotary commander until a beep sound is heard.

The voice memo will be erased and the numbers of succeeding voice memos will move up respectively.

Erasing "MEMO 3" — "MEMO 4" moves up to "MEMO 3."

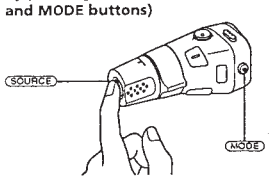
EN

Other Functions

Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls.
You can control an optional CD or MD unit with the rotary commander.

By pressing buttons (the SOURCE and MODE buttons)

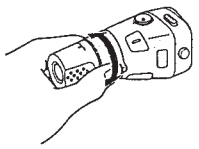


Each time you press (SOURCE), the source changes as follows:
TUNER → CD → MD

Pressing (MODE) changes the operation in the following ways;
- Tuner : FM1 → FM2 → MW → LW
- CD unit : CD1 → CD2 → ...
- MD unit : MD1 → MD2 → ...

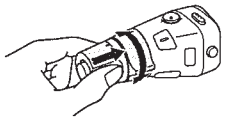
Tip
When the POWER SELECT switch is set to position O, you can turn on this unit by pressing (SOURCE) on the rotary commander.

By rotating the control (the SEEK/AMS control)



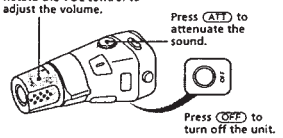
Rotate the control momentarily and release it to:
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to tune in a specific station.

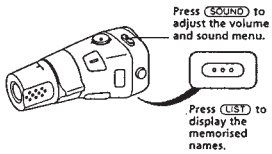
By pushing in and rotating the control (the PRESET/DISC control)

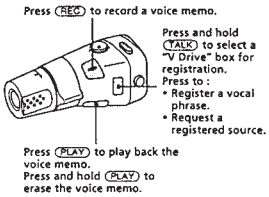


Push in and rotate the control to:
- Receive the stations memorised on the number buttons.
- Change the disc.

Other operations

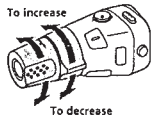




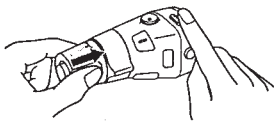

Press (REC) to record a voice memo.
Press and hold (TALK) to select a "V Drive" box for registration.
Press to :
• Register a vocal phrase.
• Request a registered source.
Press (PLAY) to play back the voice memo.
Press and hold (PLAY) to erase the voice memo.

Changing the operative direction

The operative direction of controls is factory-set as in the illustration below.



If you need to mount the rotary commander on the right side of the steering column, you can reverse the operative direction.



Press (SOUND) for two seconds while pushing the VOL control.

Tip
You can control the operative direction of controls with the unit (see "Changing the sound and display settings" on page 26).

EN

Voice Memo/Other Functions

Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader.
You can store the bass and treble levels independently for each source.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

VOL (volume) → SUB (subwoofer volume) → BAS (bass) → TRE (treble) → BAL (left-right) → FAD (rear-front)

2 Adjust the selected item by rotating the dial.
Adjust within three seconds after selecting the item. (After three seconds, the dial function reverts to volume control.)

Attenuating the sound

Press (ATT) on the rotary commander or optional wireless remote.
"ATT on" flashes momentarily.

To restore the previous volume level, press (ATT) again.

Tip
The unit decreases the volume automatically when a telephone call comes in (Telephone ATT function).

Changing the sound and display settings

The follow items can be set:
- Clock (page 7).
- CT (Clock Time) (page 21).
- D.Info (Dual Information) – to display the clock and the play mode at the same time (ON) or to display the information alternately (OFF).
- Amber/Green – to change the illumination colour to amber or green.
- Dimmer – to change the brightness of the display.
  — Select "Auto" to dim the display only when you turn the lights on.
  — Select "on" to dim the display.
  — Select "off" deactivate the Dimmer.
- Contrast – to adjust the contrast if the indications in the display are not recognizable because of the unit's installed position.
- Voice guide function for vocalized comments.
  — Select "Voice 1" to minimize the volume of the guide.
  — Select "Voice 2" to increase the volume than "Voice 1."
  — Select "Voice 3" to maximize the volume of the guide.
  — Select "Voice off" to deactivate Voice guide.
- Beep – to turn the beep sound on or off.
- RM (Rotary Commander) – to change the operative direction of the controls of the rotary commander.
  — Select "norm" to use the rotary commander in the factory-set position.
  — Select "rev" when you mount the rotary commander on the right side of the steering column.
- Loud (Loudness) – to enjoy bass and treble even at low volume. The bass and treble will be reinforced.
- LPF (Low Pass Filter) (page 27).
- A.Scrl (Auto Scroll) (page 9, 28).

1 Press (SHIFT).

2 Press ③ (SET UP) repeatedly until the desired item appears.

Each time you press ③ (SET UP), the item changes as follows:
Clock → CT → D.Info* → Amber/Green → Dimmer → Contrast → Voice* → Beep → RM → Loud* → LPF* → A.Scrl*

** When the radio is off, or when there is no CD or MD being played, these items will not appear.*

Notes
- *The displayed item will differ depending on the source.*
- *If an optional digital preamplifier is connected to the unit, Voice Guide does not work.*

3 Press ⑤ (→) to select the desired setting (for example: on or off).
For the "Contrast" setting, pressing ⑤ (→) makes the contrast higher, and pressing ② (←) makes the contrast lower.

4 Press (SHIFT).
After the mode setting is complete, the display returns to normal playback mode.

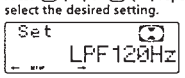
Adjusting the frequency of the subwoofer(s)

To match the characteristics of the connected subwoofer(s), you can cut out the unwanted high and middle frequency signals entering the subwoofer(s). By setting the cut-off frequency, the subwoofer(s) will output only low frequency signals for a clearer sound image.

1 Press (SOURCE) to select a source (tuner, CD, or MD).

2 Press (SHIFT), then press ③ (SET UP) repeatedly until "LPF" appears.

3 Press ⑤ (→) or ② (←) repeatedly to select the desired setting.



Each time you press ⑤ (→) or ② (←), the cut-off frequency in the display changes as follows:
LPF off ⟷ LPF 80 Hz ⟷ LPF 120 Hz

4 Press (SHIFT).
When the frequency setting is complete, the display returns to the normal playback mode.

EN

Other Functions

With Optional Equipment

CD/MD Unit

You can control up to 7 CD and MD units with this unit.
If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear in the display when you play back a CD TEXT disc.

Playing a CD or MD

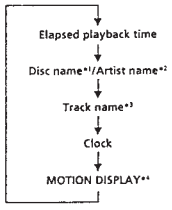
1 Press (SOURCE) repeatedly to select the CD or MD.

2 Press (MODE) until the desired unit appears.
CD/MD playback starts.

When a CD/MD unit is connected, all the tracks play from the beginning.

Changing the display item

Each time you press (DSPL) during CD, CD TEXT, or MD playback, the item changes as follows:



**1 If you have not labeled the disc or if there is no disc name prerecorded on the MD, "NO D.Name" appears in the display.*
**2 If you play a CD TEXT disc, the artist name appears in the display after the disc name. (Only for CD TEXT discs with the artist name.)*
**3 If the track name of a CD TEXT disc or MD is not prerecorded, "NO T.Name" appears in the display.*
**4 All the items above are scrolled in the display one by one in order.*

You can label CD and CD TEXT discs with a personalized name using the disc memo function, refer to "Labeling a CD" (page 32). However, if you use personalized labels, they will always take priority over the original CD TEXT information when such information is displayed.

Tips
- *If the name of the MD or CD TEXT disc is too long, you can scroll it across the display by pressing (SHIFT), then ② (←).*
- *If you want to display the original CD TEXT information after labelling the CD TEXT disc with a personalized name, press (SHIFT), then ⑤ (→).*

Automatically scrolling a disc name — Auto Scroll

If the disc name/artist name or track name on a CD TEXT disc or MD exceeds 10 characters and the Auto Scroll function is on, the following automatically scrolls on the display:
- *The disc name appears when the disc has changed (if the disc name is selected).*
- *The track name appears when the track has changed (if the track name is selected).*

If you press (DSPL) to change the display item, the disc or track name of the MD or CD TEXT disc is scrolled automatically whether you set the function on or off.

1 During playback, press (SHIFT).

2 Press ③ (SET UP) repeatedly until "A.Scrl" appears.

3 Press ⑤ (→) to select "A.Scrl on."

4 Press (SHIFT).

To cancel Auto Scroll, select "A.Scrl off" in step 2 above.

Note
For some CD TEXT discs with a lot of characters, one of the following may happen:
— Some of the characters are not displayed.
— Auto Scroll does not work.

Locating a specific track — Automatic Music Sensor (AMS)

During playback, push the SEEK/AMS control up or down once for each track you want to skip.
To locate succeeding tracks
To locate preceding tracks

Locating a specific point in a track — Manual Search

During playback, push the SEEK/AMS control up or down and hold. Release when you have found the desired point.
To search forward
To search backward

Locating a disc by disc number — Direct Disc Selection

Press the number button that corresponds with the desired disc number.
The desired disc in the current changer begins playback.

Scanning the tracks — Intro Scan

You can play the first 10 seconds of all the tracks on the current disc.

1 During playback, press (SHIFT), then press ④ (PLAY MODE) repeatedly until "Intro" appears.

2 Press ⑤ (→) to select "Intro on."
Intro Scan starts.

3 Press (SHIFT).

To return to normal playback mode, select "Intro off" in step 2 above.

Playing tracks repeatedly — Repeat Play

You can select:
- Repeat 1 – to repeat a track.
- Repeat 2 – to repeat a disc.

1 During playback, press (SHIFT).

2 Press ⑦ (REP) repeatedly until the desired setting appears.

Repeat 1 → Repeat 2 → Repeat off

Repeat Play starts.

3 Press (SHIFT).

To return to normal playback mode, select "Repeat off" in step 2 above.

Playing tracks in random order — Shuffle Play

You can select:
- Shuf 1 – to play the tracks on the current disc in random order.
- Shuf All – to play all the tracks on all discs in random order.

1 During playback, press (SHIFT).

2 Press ⑧ (SHUF) repeatedly until the desired setting appears.

Shuf 1 → Shuf All → Shuf off

Shuffle Play starts.

3 Press (SHIFT).

To return to normal playback mode, select "Shuf off" in step 2 above.

EN

CD/MD Unit

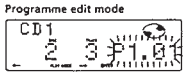
Creating a programme

— Programme Memory (CD/MD unit with programme memory function)

You can play tracks in any order you want by creating and storing programmes in the unit's memory. You can make two programmes: Programme 1 and Programme 2. You can select up to 12 tracks for each programme. You can store the programmes in memory.

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.

Programme edit mode



"P 1" indicates Programme 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ④ (PLAY MODE) to display "P 1" above.

To select Programme 2, press ⑤ (→) repeatedly until "P 2" appears.

2 Select the track you want.

❶ Press (SOURCE) repeatedly to select CD or MD.

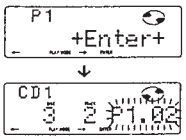
❷ Press (MODE) repeatedly to select the unit.

❸ Press (SHIFT), then press the number button to select the disc.

❹ Press (SHIFT).

❺ Push the SEEK/AMS control up or down to select the track.

3 Press ⑥ (ENTER) momentarily.



4 To continue entering tracks, repeat steps 2 and 3.

5 When you finish entering tracks, press ④ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Notes

- *"**Wait**" appears in the display while the unit is reading the data, or if a disc has not been put into the unit.*
- *"*Mem Full*" appears in the display when you try to enter more than 12 tracks into a programme.*

Playing the stored programme

Changing the disc order in the unit will not affect programme memory play.

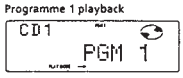
You can select:
- PGM 1 – to play Programme 1.
- PGM 2 – to play Programme 2.
- PGM 1+2 – to play Programmes 1 and 2.

1 Press (SHIFT).

2 Press ④ (PLAY MODE) repeatedly until "PGM" appears.

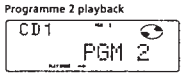
3 Press ⑤ (→) repeatedly until the desired programme appears.

Programme 1 playback



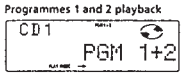
↓

Programme 2 playback



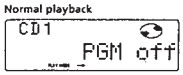
↓

Programmes 1 and 2 playback



↓

Normal playback



Play starts in the selected programme play mode.

4 Press (SHIFT).

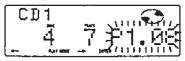
To return to normal playback mode, select "PGM off" in step 3 above.

Notes

- *If you press a number button during programme memory play, programme memory play is interrupted, and playback of the selected disc starts.*
- *"NO Data" appears in the display if no track is stored in the programme.*
- *If a track stored into the programme memory is not in the disc magazine, the track will be skipped.*
- *When the disc magazine contains no tracks stored into the programme memory, or when the programme information has not been loaded yet, "Not ready" appears.*

Erasing an entire programme

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.



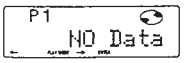
"P 1" indicates Programme 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ④ (PLAY MODE) to display "P 1" above.

2 Press ② (←) repeatedly until "DEL" appears.

To erase Programme 2, press ⑤ (→) repeatedly until "PGM 2" appears.

3 Press ⑥ (ENTER) for two seconds.



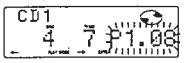
The entire programme is erased.

4 When you finish erasing programmes, press ④ (PLAY MODE) for two seconds.

5 Press (SHIFT).

Adding tracks to a programme

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.



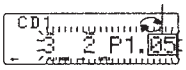
"P 1" indicates Programme 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ④ (PLAY MODE) to display "P 1" above.

To select Programme 2, press ⑤ (→) repeatedly until "P 2" appears.

2 Press ② (←) or ⑤ (→) to select the track slot number where you want to insert a track.

Track slot number



3 Push the SEEK/AMS control up or down to select the track you want to insert.

4 Press ⑥ (ENTER) momentarily to enter the track.
The current track is inserted in that slot number and the succeeding tracks shift down.
To continue inserting tracks, repeat steps 2 through 4.

Note

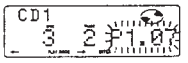
*Once all 12 slots have been filled, "*Mem Full*" appears in the display, and you cannot insert more tracks.*

5 When you finish inserting tracks, press ④ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Erasing tracks in a programme

1 Press (SHIFT), then press ④ (PLAY MODE) for two seconds.



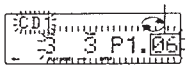
"P 1" indicates Programme 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ④ (PLAY MODE) to display "P 1" above.

To select Programme 2, press ⑤ (→) repeatedly until "P 2" appears.

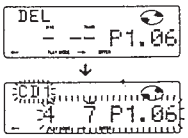
2 Press ② (←) or ⑤ (→) to select the track you want to erase.

Track slot number



The track currently registered in slot 6 of Programme 1.

3 Press ⑥ (ENTER) for two seconds.
When you erase a track from a slot number, the succeeding tracks shift up to fill the gap.



4 To continue erasing tracks, repeat steps 2 and 3.

5 When you finish erasing tracks, press ④ (PLAY MODE) for two seconds.

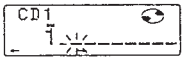
6 Press (SHIFT).

Labeling a CD — Disc Memo

(CD unit with the custom file function)

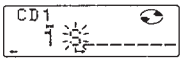
You can label each disc with a personalized name. You can enter up to eight characters for a disc. If you label a CD, you can locate the disc by name (page 34) and select the specific tracks for playback (page 34).

1 Play the CD and press (PTY/LIST) for two seconds.



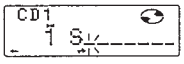
2 Enter the characters.

❶ Rotate the dial clockwise to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → - → * → / → \ → > → < → . → _)



If you rotate the dial counterclockwise, the characters appear in the reverse order.
If you want to put a blank space between characters, select "_" (underbar).

❷ Press ⑤ (→) after locating the desired character.
The flashing cursor moves to the next space.



If you press ② (←), the flashing cursor moves to the left.

❸ Repeat steps ❶ and ❷ to enter the entire name.

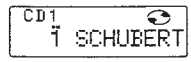
3 To return to normal CD playback mode, press (PTY/LIST) for two seconds.

Tip

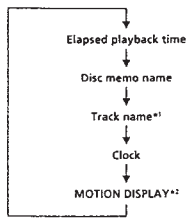
To erase or correct a name enter "_" (under-bar) for each character.

Displaying the disc memo name

Press (DSPL) during CD or CD TEXT disc playback.



Each time you press (DSPL) during CD or CD TEXT playback, the item changes as follows:



1 If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear in the display when you playback a CD TEXT disc.

2 All the items above are scrolled in the display one by one in order.

Erasing the disc memo

1 Press (SOURCE) repeatedly to select CD.

2 Press (MODE) repeatedly to select the CD unit.

3 Press (PTY/LIST) for two seconds.

4 Press (DSPL) for two seconds.

5 Rotate the dial to select the name you want to erase.

6 Press ⑥ (ENTER) for two seconds.
The name is erased.
Repeat steps 5 and 6 if you want to erase other names.

7 Press (PTY/LIST) for two seconds.
The unit returns to normal CD playback mode.

Note

When the personalized label is erased, the original CD TEXT information will appear in the display.

Locating a disc by name

— List-up (CD unit with the custom file function or MD unit)

You can use this function for discs that have been assigned a custom name. For more information on disc names, refer to "Labeling a CD" (page 32).

1 Press (PTY/LIST) momentarily.
The name assigned to the current disc appears in the display.

When you assign a disc memo label to a CD TEXT disc, it takes priority over the original CD TEXT information.

2 Press (PTY/LIST) repeatedly until you find the desired disc.

3 Press (6) (ENTER) to play back the disc.

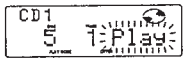
Notes
- *After a disc name has been displayed for five seconds, the display goes back to normal playback mode. To turn off the display, press (DSPL).*
- *The track names are not displayed during MD or CD TEXT disc playback.*
- *If there are no discs in the magazine, "NO Disc" appears in the display.*
- *If a disc has not been assigned a custom file, "*********" appears in the display.*
- *If the disc information has not been read by the unit, "?" appears in the display. To load a disc, first press the number button, then choose the disc that has not been loaded.*
- *The information appears only in upper case. There are also some letters which cannot be displayed (during MD or CD TEXT disc playback).*

Selecting specific tracks for playback

— Bank (CD unit with the custom file function)

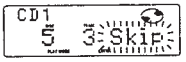
If you label the disc, you can set the unit to skip tracks and play only the tracks you want.

1 Start playing the disc and press (SHIFT). Then press (4) (PLAY MODE) for two seconds.
Bank edit mode.



Note
If you have not labeled the disc, the bank edit mode does not appear and the programme edit mode appears. To return to normal playback mode, press (4) (PLAY MODE) for two seconds.

2 Push the SEEK/AMS control up or down to select the track number you want to skip and press (6) (ENTER).



The indication changes from "Play" to "Skip." To return the indication to"Play," press (6) (ENTER) again.

3 Repeat step 2 to set "Play" or "Skip" mode for all the tracks.

4 Press (4) (PLAY MODE) for two seconds.
The unit returns to normal CD playback mode.

5 Press (SHIFT).

Notes
- *You can set the "Play" and "Skip" mode for up to 24 tracks.*
- *You cannot set the "Skip" mode for all the tracks.*

Playing the specific tracks only

You can select:
- Bank on – to play the tracks with the "Play" setting.
- Bank inv (Inverse) – to play the tracks with the "Skip" setting.

1 During playback, press (SHIFT), then press (4) (PLAY MODE) repeatedly until "Bank" appears.

2 Press (5) (→) repeatedly until the desired setting appears.

→ Bank on → Bank inv → Bank off

Playback starts from the track following the current one.

3 Press (SHIFT).

To return to normal play mode, select "Bank off" in step 2 above.

DSP

The optional XDP-U50D lets you add some effects to the sound field of the currently selected source.

The followings are the operating instructions for the XDP-U50D.
When the XDP-210EQ is connected to the unit, refer to the instructions manual supplied to the XDP-210EQ.

Note
If you connect the optional digital preamplifier XDP-U50D/210EQ, the voice guide function will not work.

Selecting a surround menu

You can select a desired surround menu to best fit the audio source. The following menus can simulate different sound fields and enhance the sound so that you feel as if you are in a live concert.

Surround menu

HALL	Concert hall
JAZZ	Jazz club
DISCO	Disco with thick walls
THEATER	Movie theater
PARK	Big open space
LIVE	Live concert
OPERA	Opera house
CHURCH	Church/chapel with a lot of reverberation
STADIUM	Open-air concert in a stadium
CELLAR	Cellar with a lot of reverberation
DEFEAT	Normal sound without any DSP effects

continue to next page →

1 Press (SOURCE) to select a source (tuner, CD, or MD).

2 Press (SOUND) repeatedly until "SUR" appears.

3 Rotate the dial to select the desired surround menu.
The surround menu appears in the order shown above.

After three seconds, the display returns to the normal playback mode.

Adjusting the effect level

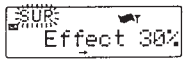
1 Press (SOURCE) to select a source (tuner, CD, or MD).

2 Press (SOUND) for two seconds.

3 Rotate the dial to select until the desired surround menu appears.

4 Press (5) (→).

5 Rotate the dial to adjust the level.
You can adjust the level from 0 to 100%. Increase the level to enhance the effect.



6 Press (SOUND) for two seconds.

Storing a surround effect onto the CDs

— Digital Signal Processor (DSP) Custom File (CD unit the with custom file function)

Once you have registered the desired surround menu onto the discs, you can enjoy the same surround menu every time you play them. (Only when you have labeled a disc by the Custom File function.)

1 During CD playback, press (PTY/LIST) for two seconds.

2 Press (PTY/LIST) until the surround menu appears.
DSP custom file mode

3 Rotate the dial to select the desired surround menu.

4 Press (PTY/LIST) for two seconds.
After the effect setting is complete, the display returns to the normal playback mode.

Playing the disc with the stored surround menu

1 Press (SHIFT), then press (4) (PLAY MODE) repeatedly until "D.File" appears.

2 Press (5) (→) to select "D.File on."
After five seconds, the display returns to the normal playback mode.

3 Press (SHIFT).

To cancel to play the disc with stored surround menu, select "D.File off" in step 2 above.

Changing the stored surround effect

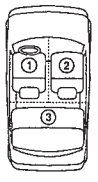
Play the disc whose surround mode you want to change, and follow the steps of "Storing a surround effect onto the CDs."

Erasing the stored surround effect

Select "DEFEAT" in step 3 of "Storing a surround effect onto the CDs."

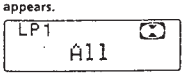
Selecting the listening position

You can set a delayed time for the sound to reach the listeners from the speakers.
In this way, the unit can simulate a natural sound field so that you feel as if you are in the center of the sound field no matter where you sit in the car.



Display window	Center of sound field
LP1 All	Normal setting (① + ② + ③)
LP2 Front	Front part (① + ②)
LP3 Front R	Right front (②)
LP4 Front L	Left front (①)
LP5 Rear	Rear part (③)

1 Press (SOUND) momentarily until "LP1" appears.



2 Rotate the dial to select the desired listening position.
The listening positions appear in the order shown above.

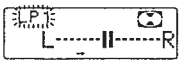
After three seconds, the display returns to the normal playback mode.

Adjusting the listening position

1 Press (SOUND) for two seconds.

2 Press (SOUND) repeatedly until the desired listening position appears.

3 Press (5) (→).

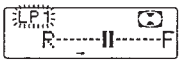


4 Rotate the dial to adjust the centre of the sound field to the left or right. Then set the center of the sound field.

Centre moves to the L (left).

Centre moves to the R (right).

5 Press (5) (→).



6 Rotate the dial to adjust the centre of the sound field to the front or rear.

Centre moves to the R (rear).

Centre moves to the F (front).

7 Press (SOUND) for two seconds.
When the effect setting is complete, the normal playback mode appears.

Adjusting the fader (FAD)

Normally, with the DSP mode on, the volume of the output sound from the rear speakers is lowered automatically to improve the efficiency of the listening position setting. If you want to raise the rear speaker volume, adjust the fader.

1 Follow steps 1 to 3 of "Selecting a surround menu" (page 35).

2 Press SOUND repeatedly until "FAD" appears.

3 Rotate the dial to adjust the fader.

Decreases front speaker volume

Increases front speaker volume

After three seconds, the display returns to the normal playback mode.

Adjusting the volume of the subwoofer(s)

1 Press SOURCE to select a source (tuner, CD, or MD).

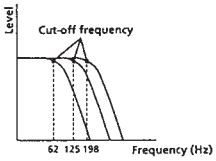
2 Press SOUND repeatedly until "SUB" appears.

3 Rotate the dial to adjust the volume.
After three seconds, the display returns to the normal playback mode.

Tip
When you rotate the dial to turn the volume all the way down, "Sub ATT" appears and the cutout frequency of the subwoofer is disabled.

Adjusting the frequency of the subwoofer(s)

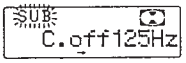
To match the characteristics of the connected subwoofer(s), you can cut out the unwanted high and middle frequency signals entering the subwoofer(s). By setting the cut-off frequency (see the diagram below), the subwoofer(s) will output only low frequency signals so you can get a clearer sound image.



1 Press SOURCE to select a source (tuner, CD, or MD).

2 Press SOUND for two seconds.

3 Press SOUND repeatedly until "SUB" appears.



4 Rotate the dial to select the desired cut-off frequency.
The cut-off frequency in the display changes as follows:

62 → 78 → 99 → 125* → 157 → 198 Hz
* Factory-set frequency

5 Press SOUND for two seconds.
After the frequency setting is complete, the display returns to the normal playback mode.

Tip
Each time you press 5 (→), the mode changes between subwoofer volume adjusting mode and the cut-off frequency adjusting mode.

Adjusting the volume of the bass and treble

You can adjust the volume of the bass and treble to best fit the acoustic characteristics inside your car.

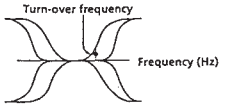
1 Press SOURCE to select a source (tuner, CD, or MD).

2 Press SOUND repeatedly until "BAS" or "TRE" appears.

3 Rotate the dial to adjust the volume.
After three seconds, the display returns to the normal playback mode.

Adjusting the turn-over frequency

You can adjust the bass and treble turn-over frequencies.

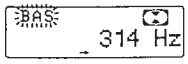


1 Press SOURCE to select a source (tuner, CD, or MD).

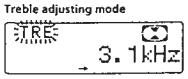
2 Press SOUND for two seconds.

3 Press SOUND repeatedly until "BAS" or "TRE" appears.

Bass adjusting mode



Treble adjusting mode



Tip
Each time you press 5 (→), the mode changes between the turn-over frequency adjusting mode and the bass and treble volume adjusting mode.

4 Rotate the dial to select the turn-over frequency.
The turn-over frequencies change as follows:

Bass:
198 Hz → 250 Hz → 314 Hz* → 396 Hz

Treble:
2.0 kHz → 3.1 kHz* → 4.0 kHz → 5.0 kHz
* Factory-set frequency

5 Press SOUND for two seconds.
The display returns to the normal playback mode.

Listening to each programme source in its registered surround menu

— Last Sound Memory (LSM)

Each time you return to the same source, you can hear the same surround effect registered for that source, even after changing the programme source or turning the unit off and then on again.

Changing the line output level

You can change the line output level if you hear distortion or other noise.

1 Press SHIFT, then press 3 (SET UP) until "L.out" appears.

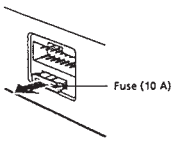
2 Press 5 (→) to select the desired setting (–10 dB or –16 dB).

3 Press SHIFT.

Maintenance

Fuse Replacement

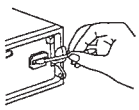
When replacing the fuse, be sure to use one matching the amperage rating stated on the original fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.



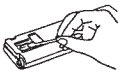
Warning
Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

Cleaning the Connectors

The unit may not function properly if the connectors between the unit and the front panel are not clean. In order to prevent this, open the front panel by pressing OPEN, then detach it and clean the connectors with a cotton swab dipped in alcohol. Do not apply too much force. Otherwise, the connectors may be damaged.



Main unit

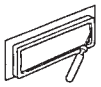


Back of the front panel

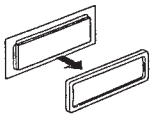
Notes
- *For safety, before cleaning the connectors, turn off the engine and remove the key from the ignition switch.*
- *Never touch the connectors directoly with your fingers or any metal device.*

Dismounting the unit

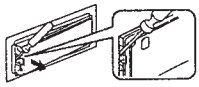
1 Press the clip inside the front cover with a thin screwdriver, and gently pry the front cover free.



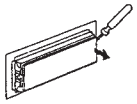
2 Repeat step 1 on the left side.
The front cover is removed.



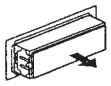
3 Use a thin screwdriver to push in the clip on the left side of the unit, then pull out the left side of the unit until the catch clears the mounting.



4 Repeat step 3 on the right side.



5 Slide the unit out of the mounting.



Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be made only by service technicians.
- Choose the installation location carefully so the unit will not interfere with the driver while driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel

Before installing the unit, detach the front panel.

To detach A

Before detaching the front panel, be sure to press (OFF) first. Then press (OPEN) to open the front panel, then slide the front panel to the right side, and pull out the left side of the front panel.

To attach B

Place the hole Ⓐ in the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.

Instalación

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para realizar ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Elija cuidadosamente el lugar de instalación de forma que la unidad no interfiera en las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

Para extraerlo A

Antes de extraer el panel frontal, cerciórese de presionar (OFF). Después presione (OPEN) a fin de abrirlo, después deslícelo hacia la derecha, y por último tire de su parte izquierda.

Para instalarlo B

Coloque el orificio Ⓐ del panel frontal en el eje Ⓑ de la unidad, como se muestra en la ilustración, y después presione la parte izquierda.

Montering

Säkerhetsföreskrifter

- Låt de fyra hålen på bilstereons ovansida vara. De är till för radiojusteringar som endast får utföras av fackkunniga tekniker.
- Välj installationsställe omsorgsfull så att den inte stör förarens koncentration under körningen.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

Ta loss/fästa frontpanelen

Ta loss frontpanelen innan du monterar bilstereon.

Ta loss frontpanelen A

Var noga med att trycka på (OFF) innan frontpanelen tas loss. Tryck därefter på (OPEN) för att öppna frontpanelen. Skjut frontpanelen åt höger och dra dess vänstra del utåt för att ta loss frontpanelen.

Fästa frontpanelen B

Placera frontpanelen så att hålet Ⓑ på frontpanelen träs över axeln Ⓐ på bilstereon enligt illustrationen. Tryck därefter frontpanelens vänstra del inåt.

Instalação

Precauções

- Não altere indevidamente os quatro orifícios da superfície da parte superior do aparelho. Estes servem para regulações do sintonizador que devem ser efectuadas somente por técnicos qualificados.
- Escolha com cuidado o local de instalação para que o aparelho não prejudique a condução.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, tais como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o material de montagem fornecido.

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem a menos de 20°.

Para retirar e colocar o painel frontal

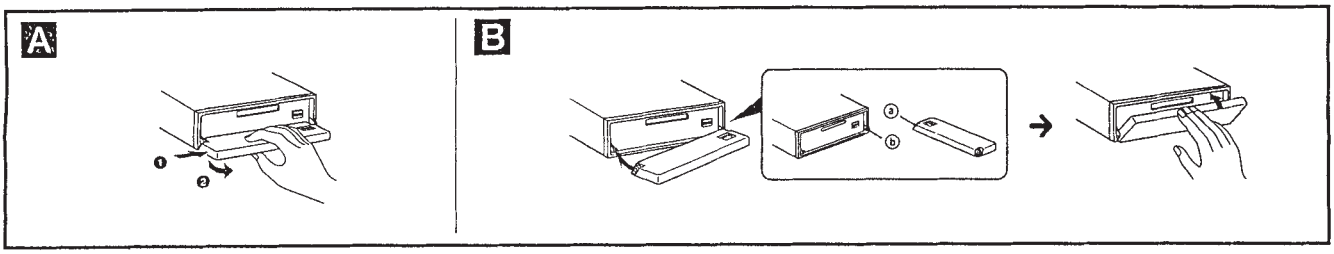
Retire o painel frontal antes de iniciar a instalação do aparelho.

Para retirar A

Antes de retirar o painel frontal, tem de carregar primeiro em (OFF). A seguir, carregue em (OPEN) para soltar o painel frontal e empurre-o para a direita. Depois puxe o lado esquerdo do painel para fora.

Para colocar B

Coloque o orifício Ⓐ do painel frontal no eixo Ⓑ do aparelho tal como ilustrado, e então pressione o lado esquerdo para dentro.

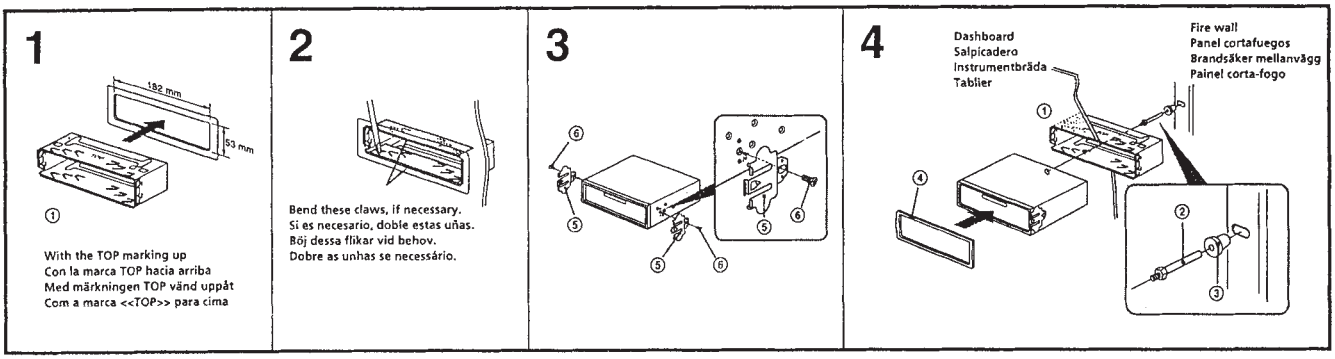


Installation in the dashboard

Instalación en el salpicadero

Montera på instrumentbrädan

Instalação no tablier



Reset button

When the installation and connections are over, be sure to press the reset button with a ballpoint pen etc.

Botón de reposición

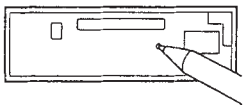
Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

Nollställningsknappen

Se till att trycka på återställningsknappen med en kulspetspenna eller liknande, när installationen och anslutningarna är klara.

Botão de reinicialização

Depois de terminar a instalação e as ligações, tem de carregar no botão de inicialização com uma esferográfica.



Microphone precautions

- This system receives the driver's voice from the microphone. When it is noisy outside your car, shut the windows. Engine noise may also prevent the system from recognizing the driver's voice.
- This microphone can receive sound from one direction only (directional microphone). Therefore it is important to install the microphone properly to ensure the driver's voice will be received.

Observera beträffande mikrofonen

- Systemet tar emot förarens röst från mikrofonen. När det är bullrigt utanför bilen bör du stänga fönstren. Motorljud kan också hindra systemet från att känna igen förarens röst.
- Mikrofonen kan ta emot ljud endast från en riktning (mikrofon för ljudupptagning i en riktning). Det är därför viktigt att installera mikrofonen korrekt för att garantera att förarens röst kan tas emot.

Installing the Microphone

Installation location

- Install the microphone underneath the sun visor in the pushed up position. Note that when the sun visor is lowered, the microphone will not receive the driver's voice.
- Install the microphone so that the arrow on the bottom points toward the driver.

Installera mikrofonen

Placering

- Installera mikrofonen under solskyddet när det befinner sig i uppfällt läge. Observera att mikrofonen inte kommer att ta emot förarens röst när solskyddet är nedfällt.
- Installera mikrofonen så att pilen på underdelen pekar mot föraren.

Precauciones sobre el micrófono

- Este sistema recibe la voz del conductor mediante el micrófono. Si hay ruido en el exterior, cierre las ventanillas del automóvil. El ruido del motor puede igualmente impedir que el sistema reconozca la voz del conductor.
- Este micrófono puede recibir el sonido sólo desde una dirección (micrófono direccional). Por tanto, es importante que lo instale adecuadamente con el fin de garantizar la recepción de la voz del conductor.

Precauções relativas ao microfone

- Este sistema recebe a voz do condutor através do microfone. Se houver muito ruído no exterior, feche as janelas. O ruído do motor também pode evitar que o sistema reconheça a voz do condutor.
- Este microfone só recebe o som de uma direcção (microfone unidireccional). Deste modo, é importante instalar o microfone correctamente para garantir a recepção da voz do condutor.

Instalación del micrófono

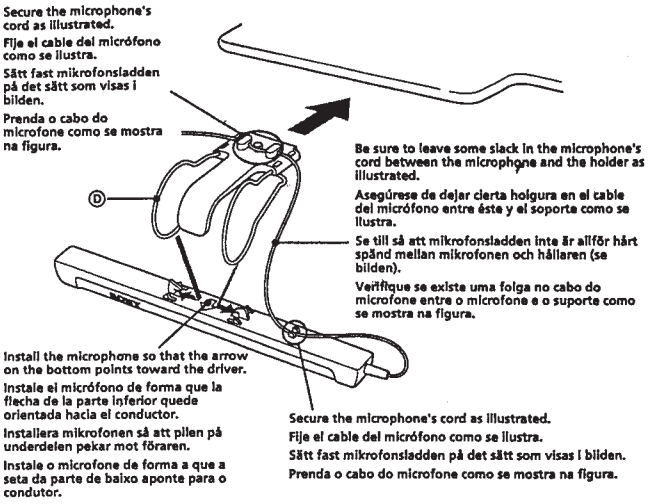
Ubicación de instalación

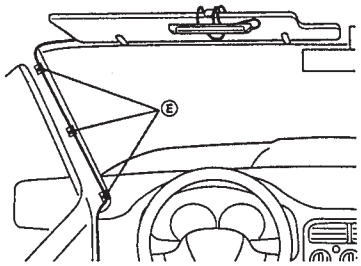
- Instale el micrófono por debajo del parasol en su posición plegada. Tenga en cuenta que cuando el parasol no esté plegado, el micrófono no recibirá la voz del conductor.
- Instale el micrófono de forma que la flecha de la parte inferior quede orientada hacia el conductor.

Instalar o microfone

Local de instalação

- Instale o microfone por baixo da pala do sol, com esta puxada para cima. Quando baixar a pala do sol, o microfone não recebe a voz do condutor.
- Instale o microfone de forma a que a seta existente em baixo aponte para o condutor.


Secure the microphone's cord as illustrated.
Fije el cable del micrófono como se ilustra.
Sätt fast mikrofonsladden på det sätt som visas i bilden.
Prenda o cabo do microfone como se mostra na figura.
Ⓓ
Be sure to leave some slack in the microphone's cord between the microphone and the holder as illustrated.
Asegúrese de dejar cierta holgura en el cable del micrófono entre éste y el soporte como se ilustra.
Se till så att mikrofonsladden inte är alltför hårt spänd mellan mikrofonen och hållaren (se bilden).
Verifique se existe uma folga no cabo do microfone entre o microfone e o suporte como se mostra na figura.
Install the microphone so that the arrow on the bottom points toward the driver.
Instale el micrófono de forma que la flecha de la parte inferior quede orientada hacia el conductor.
Installera mikrofonen så att pilen på underdelen pekar mot föraren.
Instale o microfone de forma a que a seta da parte de baixo aponte para o condutor.
Secure the microphone's cord as illustrated.
Fije el cable del micrófono como se ilustra.
Sätt fast mikrofonsladden på det sätt som visas i bilden.
Prenda o cabo do microfone como se mostra na figura.



Secure the wire to the window frame so that the wire does not interfere with driving. Before attaching the clamp Ⓔ, clean the surface thoroughly.

Fäst kabeln mot fönsterramen så att den inte stör körningen. Se till att göra ren ytan ordentligt innan du sätter fast klämma Ⓔ.

Fije el cable en el marco de la ventanilla de forma que dicho cable no interfiera en la conducción. Antes de fijar la abrazadera Ⓔ, limpie a fondo la superficie.

Fixe o fio na moldura da janela para que não interfira com a condução. Antes de colocar o grampo Ⓔ, limpe bem a superfície.

Connecting the microphone

1. Connect the microphone to the MIC jack of the audio equipment. (Refer to the "Installation/Connectinos" supplied with the unit as well.)
2. Bndle up the connecting cord of the microphone with other connecting cords of the audio equipment by attaching the supplied cramper Ⓒ. Be sure to leave some slack in the connecting cord between the plug and the cramper.

Ansluta mikrofonen

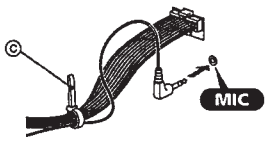
1. Anslut mikrofonen till ljudutrustningens MIC-uttag. (Mer information finns i den medföljande Montering/Anslutning)
2. Bunta ihop mikrofonens anslutningskabel med andra anslutningskablar på ljudutrustningen genom att sätta fast kabelklämma Ⓒ (medföljer). Se till att det finns ett visst utrymme på anslutningskabeln mellan kontakten och klämman.

Conexión del micrófono

1. Conecte el micrófono a la toma MIC del equipo de audio. (Consulte también el documento "Instalación/Conexiones" suministrado con la unidad.)
2. Agrupe el cable de conexión del micrófono con el resto de cables de conexión del equipo de audio mediante el fijador de cables Ⓒ suministrado. Asegúrese de dejar cierta holgura en el cable de conexión entre el enchufe y dicho fijador.

Ligar o microfone

1. Ligue o microfone à ficha MIC do equipamento de audio. (consulte o manual «Instalação/Ligações» fornecido com o aparelho).
2. Ate o cabo de ligação do microfone com os outros cabos de ligação do equipamento de audio instalando uma braçadeira Ⓒ. Deixe uma folga no cabo de ligação entre a ficha e a braçadeira.



When you leave your car

Hide the microphone over the sun visor as illustrated to protect the microphone from being stolen.

När du lämnar bilen

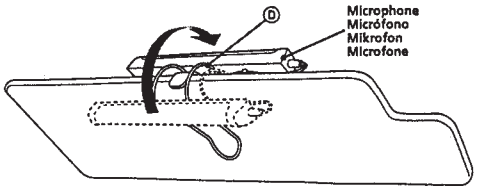
Skydda mikrofonen från stöld genom att gömma den bakom solskyddet (se bilden).

Cuando abandone el automóvil

Oculte el micrófono sobre el parasol como se ilustra para evitar que roben dicho micrófono.

Quando sair do automóvel

Esconda o microfne na pala como se mostra na figura para evitar que seja roubado.



Installing the rotary commander

Notes

- *Choose the mounting location carefully so that the rotary commander will not interfere with operating the car.*
- *Do not install the rotary commander in a place where it may jeopardize the safety of the (front) passenger in anyway.*
- *When installing the rotary commander, be sure not to damage the electrical cables etc. on the other side of the mounting surface.*
- *Avoid installing the rotary commander where it may be subject to high temperatures, such as from direct sunlight or hot air from the heater etc.*

Instalación del mando rotativo

Notas

- *Elija cuidadosamente el lugar de montaje de forma que el mando rotativo no dificulte la conducción del coche.*
- *No instale el mando rotativo en un lugar donde pueda poner en peligro la seguridad del pasajero acompañante.*
- *Al instalar el mando rotativo, asegúrese de no dañar los cables de electricidad, etc., del otro lado de la superficie de montaje.*
- *Procure no instalar el mando rotativo en un lugar expuesto a altas temperaturas, como a la luz solar directa o al aire caliente de la calefacción, etc.*

Installera vridkontrollen

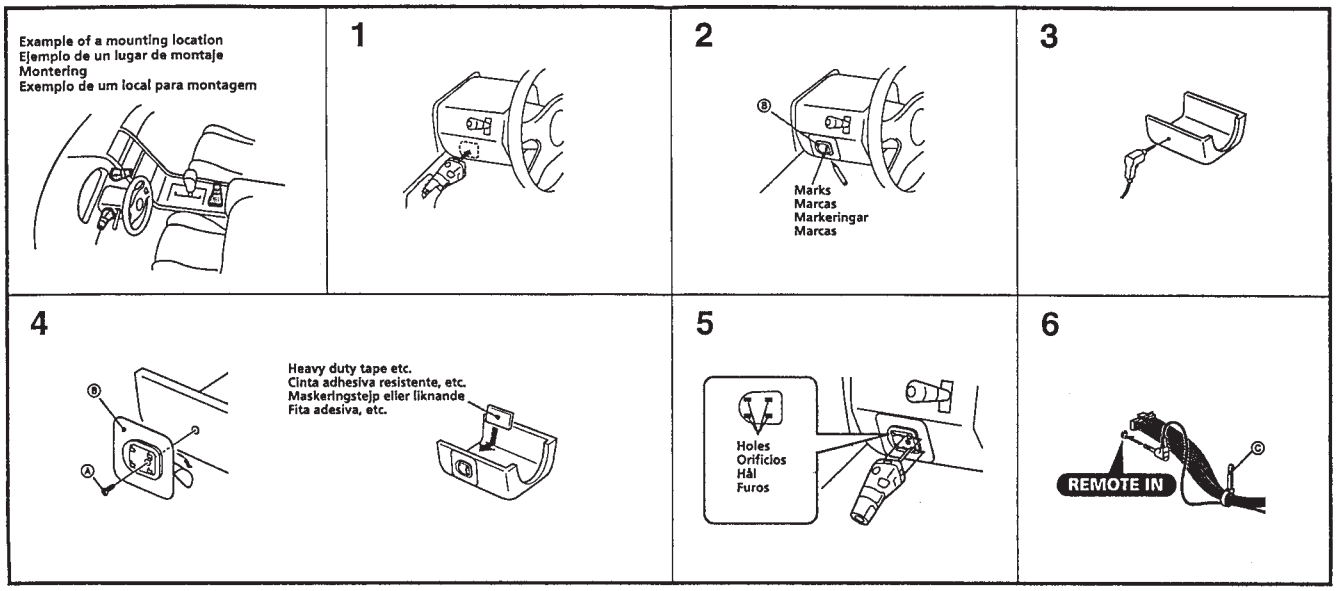
Observera

- *Var noga med var du monterar vridkontrollen så att den inte är i vägen när du kör.*
- *Installera inte vridkontrollen där den utgör en säkerhetsrisk för passagerare i framsätet.*
- *Var försiktig när du installerar vridkontrollen så att du inte skadar elkablar eller liknande på monteringsytans baksida.*
- *Undvik att installera vridkontrollen så att den utsätts för höga temperaturer, direkt solljus eller stark värme från värmefläkten osv.*

Instalação do comando rotativo

Notas

- *Seleccione cuidadosamente o local de montagem de forma a que o comando rotativo não interfira com a condução do automóvel.*
- *Não instale o comando rotativo em locais onde este possa, por algum motivo, pôr em perigo a segurança do passageiro da frente.*
- *Quando da instalação do comando rotativo, certifique-se de que não danifica os fios eléctricos, etc., localizados no outro lado da superfície de montagem.*
- *Evite instalar o comando rotativo em locais em que este fique exposto a temperaturas elevadas causadas, por exemplo, pela incidência directa dos raios solares, pelo ar quente do aquecimento, etc.*



1 **Choose the exact location for the rotary commander to be mounted, then clean the mounting surface.**
Dirt or oil impair the adhesive strength of the double-sided adhesive tape.

2 **Mark position for the supplied screw.**
Use the screw hole on the mounting hardware Ⓑ to mark the position.

If you cannot make the mounting hardware Ⓑ fit easy; cut the mounting hardware Ⓑ to fit the steering wheel column cover.

3 **Remove the steering wheel column cover, and drill 2 mm diameter hole where you have marked.**

4 **Warm the mounting surface and the double-sided adhesive tape on the mounting hardware Ⓑ to the temperature of 20 °C to 30 °C, and attach the mounting hardware onto the mounting surface by applying even pressure. Then screw it down with the supplied screw Ⓐ.**
Attach a piece of heavy duty tape etc. on the other side of the mounting surface to cover the protruding tips of the screws so that they will not interfere with the electrical cables etc. inside the steering wheel column.

5 **After installing the steering wheel column cover, attach the rotary commander to the mounting hardware by aligning the four holes on the bottom of the rotary commander to the four catches on the mounting hardware and sliding the rotary commander until it locks into place as illustrated.**

Note
If you are mounting the rotary commander to the steering wheel column, make sure that the protruding tips of the screws on the inner surface of the column do not in anyway hinder or interfere with the movement of the rotating shaft, operative parts of the switches or the electrical cables etc. inside the column.

6 **After connecting, bundle up the connecting cord of the rotary remote with other connecting cords of the audio equipment by attaching the supplied cramper Ⓒ. Be sure to leave some slack in the connecting cord between the plug and the cramper as illustrated.**

1 **Una vez elegido el lugar de montaje del mando rotativo, limpie previamente la superficie de montaje.**
La suciedad o la grasa dañan la intensidad adhesiva de la cinta adhesiva de dos caras.

2 **Marque la posición para el tornillo suministrado.**
Para ello, utilice el orificio para tornillo de la ferretería de montaje Ⓑ.

Si no es posible instalar con facilidad la pieza Ⓑ, córtela de forma que encaje en la cubierta de la columna de la dirección.

3 **Extraiga la cubierta de la columna de la dirección y haga orificios de 2 mm. de diámetro en los lugares marcados.**

4 **Caliente la superficie de montaje y la cinta adhesiva de doble cara de la ferretería de montaje Ⓑ a una temperatura entre 20 °C y 30 °C, y ajuste la ferretería de montaje a la superficie de montaje ejerciendo una presión uniforme. A continuación, apriete el tornillo Ⓐ suministrado.**
Adhiera un trozo de cinta adhesiva resistente, etc. en el otro lado de la superficie de montaje para cubrir los extremos de los tornillos que sobresalgan, de forma que no interfieran con los cables de electricidad, etc., del interior de la columna de dirección.

5 **Una vez instalada la cubierta de la columna de dirección, fije el mando rotativo a la ferretería de montaje alineando los cuatro orificios de la parte inferior del mando con los cuatro enganches de la ferretería de montaje. A continuación, deslice el mando hasta que encaje en su sitio como se muestra en la ilustración.**

Nota
Si monta el mando rotativo en la columna de dirección, asegúrese de que los extremos de los tornillos que sobresalgan de la superficie interior de la columna no dificulten el movimiento del eje de rotación ni los componentes operativos de los conmutadores o los cables de electricidad, etc., del interior de la columna.

6 **Una vez realizada la conexión, recoja el cable de conexión del mando con el resto de los cables de conexión del equipo de audio mediante el fijador de cables Ⓒ suministrado. Como muestra la ilustración, procure dejar un espacio en el cable de conexión entre el enchufe y el fijador de cables.**

1 **Välj var du vill montera vridkontrollen och rengör ytan.**
Smuts eller olja minskar den dubbelsidiga tejpens fästförmåga.

2 **Markera var du ska borra hål för skruvarna.**
Du kan göra markeringen utifrån skruvhålet på monteringsdelen Ⓑ.

Om du inte får monteringsdelen Ⓑ att passa; skär den Ⓑ så att den passar höljet som skyddar rattens styrstång.

3 **Ta loss höljet som skyddar rattens styrstång och borra hål med 2 mm diameter där du har gjort markeringarna.**

4 **Värm monteringsytan och den dubbelsidiga tejpen på monteringsdelen Ⓑ till mellan 20 °C och 30 °C och tryck fast monteringsdelen. Skruva sedan fast den med den medföljande skruven Ⓐ.**
Använd maskeringstejp för att täcka över skruvspetsarna på monteringsytans baksida så att de inte skaver mot elkablar eller liknande innanför styrstångens hölje.

5 **När du har satt tillbaka styrstångshöljet fäster du vridkontrollen på monteringsdelen genom att justera de fyra hålen på kontrollens undersida efter de fyra spärrarna på monteringsdelen och skjuta ned kontrollen tills den låses på plats, se bilden.**

Observera
Om du monterar vridkontrollen på höljet till rattens styrstång måste du se till att de utskjutande skruvspetsarna inuti höljet inte hindrar styrningen av bilen eller kommer i vägen för annan utrustning eller elkablarna inuti höljet.

6 **När du är klar fäster du ihop sladden till vridkommandot och andra sladdar till ljudutrustningen med medföljande krampa Ⓒ. Se till så att sladdarna mellan kontakten och fästanordningen inte blir för hårt spända, se bilden.**

1 **Escolha o local exacto onde deseja montar o comando rotativo e depois limpe a superfície de montagem.**
A sujidade ou o óleo diminui as capacidades adesivas da fita adesiva dupla.

2 **Marque a posição para o parafuso fornecido.**
Para marcar a posição, utilize o orifício do parafuso do material de montagem Ⓑ.

Se a peça Ⓑ não encaixar com facilidade, corte-o de forma a ajustar-se à coluna da direcção.

3 **Retire a cobertura da coluna da direcção e faça furos com 2 mm de diâmetro nos locais marcados.**

4 **Aqueça a superfície de montagem e a fita adesiva dupla da peça Ⓑ até uma temperatura de 20 °C a 30 °C, e fixe a peça na superfície respectiva exercendo uma pressão uniforme. Em seguida, fixe com o parafuso Ⓐ fornecido.**
Coloque um pouco de fita adesiva, etc. no outro lado da superfície de montagem para tapar as protuberâncias dos parafusos, de forma a que estes não interfiram com os cabos eléctricos, etc., localizados no interior da coluna da direcção.

5 **Após a instalação da cobertura da coluna da direcção, fixe o comando rotativo à peça, alinhando os quatro orifícios da extremidade inferior do comando com as quatro buchas da peça e fazendo deslizar o comando até que este se fixe correctamente, conforme o ilustrado.**

Nota
Se montar o comando rotativo na coluna da direcção, certifique-se de que as protuberâncias dos parafusos na superfície interior da coluna não prejudicam ou interferem com o movimento do eixo rotativo, com as partes operativas dos comutadores ou com os cabos eléctricos, etc., localizados no interior da coluna.

6 **Depois de ter efectuado a ligação, una o cabo de ligação do comando aos outros cabos de ligação do equipamento áudio mediante a utilização da braçadeira Ⓒ fornecida. Deixe alguma folga no cabo de ligação entre a ficha e a braçadeira, conforme a ilustração.**

Connections

Caution

- This unit is designed for negative earth 12 V DC operation only.
- Connect the power connecting cord ⑦ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If your car has no accessory position on the ignition key switch — POWER SELECT switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear if your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the bottom of the unit to the ❽ position, then press the reset button. The illumination is reset to stay off while the unit is not being played.

Notes

- *The caution alarm for the front panel and TIR indicator is not activated when the POWER SELECT switch is set to the ❽ position.*
- *Do not use excessive force when changing the POWER SELECT switch.*

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse solamente con 12 V CC, negativo a masa.
- Conecte el cable de conexión de alimentación ⑦ a la unidad y a los altavoces antes de hacerlo al conector de alimentación auxiliar.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil que tenga una capacidad superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estereofónicos, el circuito del automóvil al que se encuentran conectados debe tener una capacidad superior a la de la suma de las capacidades de los fusibles de cada componente. Si ningún circuito del automóvil tiene una capacidad tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si el automóvil no dispone de ningún circuito para conectar esta unidad, conéctela a un circuito del automóvil con capacidad superior a la del fusible de la unidad, de forma que si se funde el fusible de ésta, no se interrumpa ningún otro circuito.

Si el automóvil no dispone de posición para accesorios en la llave de encendido

— Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en funcionamiento. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ❽ y, después, presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en funcionamiento.

Notas

- *La alarma de precaución del panel frontal y el indicador TIR no se activarán cuando el selector POWER SELECT se encuentre en la posición ❽.*
- *No emplee excesiva fuerza al cambiar el selector POWER SELECT.*

Anslutning

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Anslut strömkabeln ⑦ till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut den gula kabeln till en ledig bilkrets som har en säkring med ett högre ampere än enheten. Om du seriekopplar denna enhet med andra stereokomponenter, måste den bilkrets de är kopplade till ha en säkring med en högre ampere än summan av de enskilda komponenternas ampere. Om det inte finns någon bilkrets som har en säkring med ett lika högt ampere som enheten, ska du ansluta enheten direkt till batteriet. Om det inte finns några bilkretsar att ansluta denna enhet till ska du ansluta enheten till en enhet som har en säkring med ett högre ampere än enheten för att förhindra att inga andra kretsar klipps av om säkringen går.

Montera bilstereon i en bil vars tändlås inte har något strömläge

— Omkopplaren POWER SELECT

Belysningen på frontpanelen är standardinställd att vara påslagen även spelaren om inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon i **en bil, vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge ❽, och tryck sedan på återställningsknappen** för att undvika att bilbatteriet laddas ur. Belysningen har ställts in till att vara avstängd när spelaren inte används.

Observera

- *Varningssignalen, som varnar om du inte har tagit loss frontpanelen och TIR-indikatorn, ljuder inte när omkopplaren POWER SELECT står i läge ❽.*
- *Ta inte i för mycket när du byter POWER SELECT-omkopplaren.*

Connexions

Advertência

- Este aparelho foi projectado para funcionar somente com corrente contínua de 12 V com negativo à massa
- Ligue o cabo de alimentação de corrente ⑦ ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- **Ligue todos os fios de terra num ponto de massa comum.**
- Ligue o cabo amarelo a um circuito livre do automóvel com uma capacidade nominal superior à do fusível do aparelho. Se ligar este aparelho em série com outros componentes estéreo, o circuito do automóvel a que estão ligados deve ter uma capacidade nominal superior à soma da capacidade dos fusíveis de cada componente. Se nenhum circuito do automóvel tiver uma capacidade tão alta como a do fusível do aparelho, ligue o aparelho directamente à bateria. Se o automóvel não tiver nenhum circuito disponível para ligação do aparelho, ligue-o a um circuito com uma capacidade superior à do fusível do aparelho para que se o fusível do aparelho se fundir, nenhum dos outros circuitos seja cortado.

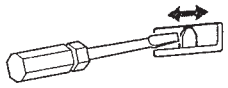
Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios

— Interruptor POWER SELECT

A luz do painel frontal vem regulada de fábrica para se acender mesmo que o aparelho não esteja a funcionar. No entanto, esta regulação pode provocar a descarga da bateria **se o aparelho for utilizado em automóveis sem chave de ignição com posição acessórios.** Para evitar a descarga da bateria, **regule o interruptor POWER SELECT, situado na base do aparelho, para a posição ❽. Em seguida, carregue no botão de reinicialização.** A luz fica regulada para se apagar quando o aparelho não estiver a funcionar.

Notas

- *O alarme de advertência do painel frontal e o indicador TIR não são activados quando o interruptor POWER SELECT estiver regulado para a posição ❽.*
- *Não faça demasiada força quando mudar a posição do selector POWER SELECT*



Notes of connection example

Notes on the control leads

- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), the TA (Traffic Announcement) or the TIR (Traffic Information Replay) functions.*
- *A power aerial without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑦ may damage the aerial.

Notas de ejemplo de conexiones

Notas sobre conductores de control

- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador o cuando active la función de frecuencia alternativa (AF), la de anuncios de tráfico (TA) o de repetición de información sobre tráfico (TIR).*
- *No es posible emplear con esta unidad una antena motorizada sin caja de relé.*

Conexión para protección de la memoria

Si conecta el conductor de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque sitúe la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑦ suministrado puede dañar la antena.

Att observera angående anslutningsexemplen

Att observera angående de olika styrkablarna

- *Motorantennens styrkabel (blå) leder 12 V likström när bilradion slås på eller när du aktiverar alternativa frekvenser (AF), trafikmeddelanden (TA) eller TIR (Traffic Information Replay).*
- *En strömantenn utan reläskåp kan inte användas med denna enhet.*

Anslutning för minnesstöd

När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

Att observera angående högtalarnas anslutning

- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda effektförstärkare) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.*

Varning

Om du har en motorantenn utan relädosa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑦.

Notas sobre o exemplo de ligação

Notas sobre os fios de controlo

- *O fio de controlo da antena eléctrica (azul) fornece uma corrente contínua (CC) de +12 V quando se liga o sintonizador ou se activa a função AF (Frequência Alternativa), TA (Informações de Trânsito) ou TIR (Reprodução das Informações de Trânsito).*
- *Com este aparelho não pode utilizar uma antena eléctrica sem caixa de relé.*

Ligação para alimentação contínua da memória

Quando ligar o fio amarelo de entrada de alimentação, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

Notas sobre a ligação dos altifalantes

- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho.*

Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.

Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar esta aparelho com a cabo de alimentação ⑦ fornecido, pode provocar danos na antena.

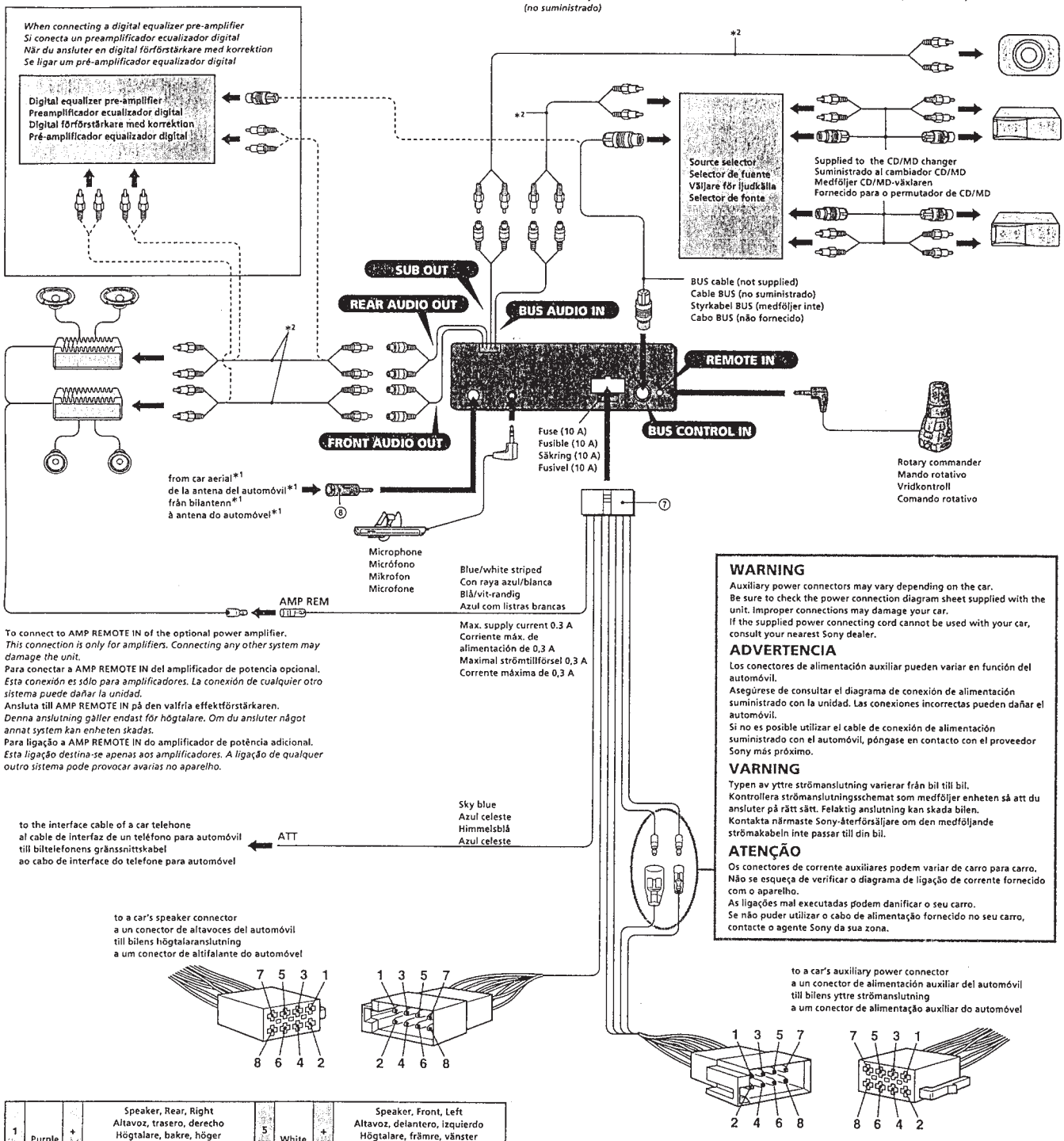
Connection example
Ejemplo de conexiones
Anslutningarna enligt exemplet
Exemplo de ligações

*1 *Note for the aerial connecting*
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑧ to connect it. First connect the car aerial to the supplied adapter, then connect it to the aerial jack of the master unit.
*2 *RCA pin cord (not supplied)*

*1 *Nota sobre la conexión de la antena*
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado ⑧ para conectarla. En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.
*2 *Cable con clavijas RCA (no suministrado)*

*1 *Angående antennanslutning*
Om motorantennen är av ISO-typ (International Organization for Standardization), använder du medföljande adapter ⑧ för att ansluta den. Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.
*2 *Kabel med RCA-kontakter (medföljer inte)*

*1 *Nota referente à ligação da antena*
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido ⑧ para fazer a ligação respectiva. Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.
*2 *Cabo de terminais RCA (não fornecido)*



To connect to AMP REMOTE IN of the optional power amplifier.
This connection is only for amplifiers. Connecting any other system may damage the unit.
Para conectar a AMP REMOTE IN del amplificador de potencia opcional.
Esta conexión es sólo para amplificadores. La conexión de cualquier otro sistema puede dañar la unidad.
Ansluta till AMP REMOTE IN på den valfria effektförstärkaren.
Denna anslutning gäller endast för högtalare. Om du ansluter något annat system kan enheten skadas.
Para ligação a AMP REMOTE IN do amplificador de potência adicional.
Esta ligação destina-se apenas aos amplificadores. A ligação de qualquer outro sistema pode provocar avarias no aparelho.

WARNING
Auxiliary power connectors may vary depending on the car.
Be sure to check the power connection diagram sheet supplied with the unit. Improper connections may damage your car.
If the supplied power connecting cord cannot be used with your car, consult your nearest Sony dealer.

ADVERTENCIA
Los conectores de alimentación auxiliar pueden variar en función del automóvil.
Asegúrese de consultar el diagrama de conexión de alimentación suministrado con la unidad. Las conexiones incorrectas pueden dañar el automóvil.
Si no es posible utilizar el cable de conexión de alimentación suministrado con el automóvil, póngase en contacto con el proveedor Sony más próximo.

VARNING
Typen av yttre strömanslutning varierar från bil till bil.
Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen.
Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

ATENÇÃO
Os conectores de corrente auxiliares podem variar de carro para carro.
Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho.
As ligações mal executadas podem danificar o seu carro.
Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

1	Purple Púrpura	+	Speaker, Rear, Right Altavoz, trasero, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	5	White Blanco Vit	+	Speaker, Front, Left Altavoz, delantero, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
2	Morklila Violeta	–	Speaker, Rear, Right Altavoz, trasero, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	6	Branco	–	Speaker, Front, Left Altavoz, delantero, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
3	Grey Gris Grå Cinza	+	Speaker, Front, Right Altavoz, delantero, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	7	Green Verde Grön Verde	+	Speaker, Rear, Left Altavoz, trasero, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo
4		–	Speaker, Front, Right Altavoz, delantero, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	8		–	Speaker, Rear, Left Altavoz, trasero, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.

4	Yellow Amarillo Gul Amarelo	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente contínua	7	Red Rojo Röd Vermelho	switched power supply suministro de alimentación conmutado switchad strömförsörjning alimentação de corrente comutada
5	Blue Azul Blå Azul	power aerial control antena eléctrica elektrisk antenn antena eléctrica	8	Black Negro Svart Preto	earth toma de tierra jord Terra
6	Orange/White Naranja/blanco Orange/vit Cor de laranja/branco	switched illumination power supply fuente de alimentación de iluminación conmutada Switchad strömförsörjning till belysning fonte de alimentação comutada para iluminação			

Positions 1, 2 and 3 do not have pins.
Las posiciones 1, 2 y 3 no disponen de pines.
Positionerna 1, 2 och 3 saknar stift.
As posições 1, 2 e 3 não têm pinos.

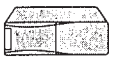
Connection diagram
Diagrama de conexiones
Kopplingsschema
Diagrama de ligações

Equipment used in illustrations (not supplied)
Equipo utilizado en las ilustraciones (no suministrado)
Utrustning som visas i illustrationer (medföljer inte)
Equipamento utilizado nas ilustrações (não fornecido)

Front speaker
Altavoz delantero
Främre högtalare
Altifalante dianteiro

Power amplifier
Amplificador de potencia
Effektförstärkare
Amplificador de potência

Rear speaker
Altavoces trasero
Bakre högtalare
Altifalantes traseiro

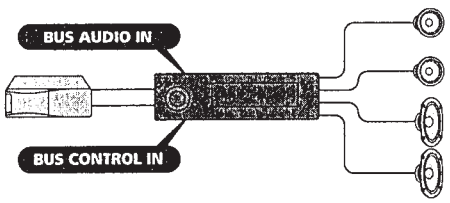


CD/MD changer
Cambiador de CD/MD
Permutador CD/MD
CD/MD-skivväxlare

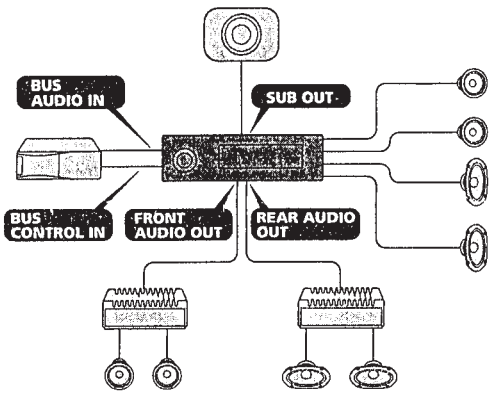
Active subwoofer
Altavoz potenciador de graves activo
Aktiv subwoofer
Subwoofer activo

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.
Si desea conectar dos o más cambiadores, necesitará el selector de fuente XA-C30 (opcional).
För anslutning av två eller flera växlare krävs väljaren XA-C30 (tillval).
Para ligar um ou mais permutadores, é necessário o selector de fonte XA-C30 (opcional).

A



B



C

When connecting a digital equalizer pre-amplifier (XDP-210EQ, etc.)

- *Use an optional exterior amplifier. The built-in amplifier of this unit can not be used in this case. For details, refer to the Installation/Connections manual XDP-210EQ, etc.*
- *For details about the connection, refer to the Installation/ Connections manual XDP-210EQ, etc. (not supplied)*

Si conecta un preamplificador ecualizador digital (XDP-210EQ, etc.)

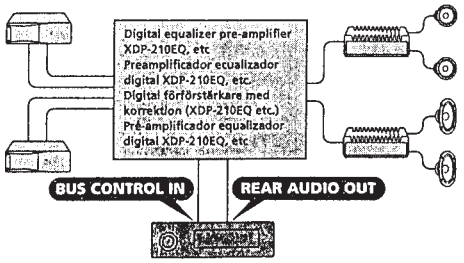
- *Utilice un amplificador opcional externo. El amplificador incorporado de esta unidad no puede utilizarse en este caso. Para más información, consulte el manual de instalación/conexiones de la unidad XDP-210EQ, etc.*
- *Para obtener información detallada sobre la conexión, consulte el manual de instalación/conexiones de la unidad XDP-210EQ, etc. (no suministrada).*

När du ansluter en digital förförstärkare med korrektion (XDP-210EQ etc.)

- *Använd en valfri extern förstärkare. Den inbyggda förstärkaren kan inte användas i detta fall. Mer information finns i installations-/monteringshandboken XDP-210EQ etc.*
- *Mer information om hur du ansluter utrustning finns i installations-/monteringshandboken XDP-210EQ etc. (medföljer inte)*

Se ligar um pré-amplificador equalizador digital (XDP-210EQ, etc.)

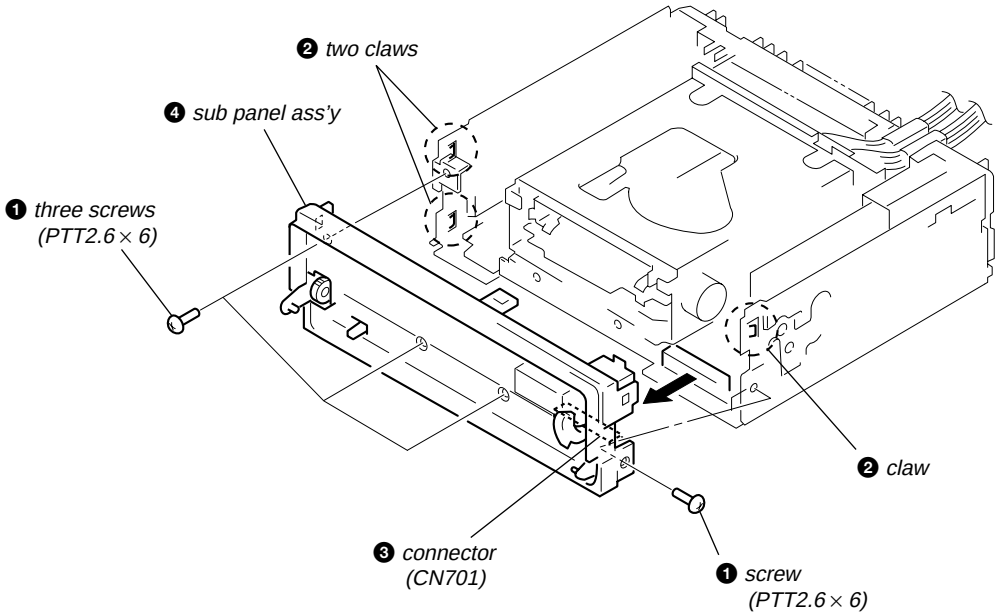
- *Pode utilizar um amplificador exterior opcional. O amplificador integrado neste aparelho não pode ser utilizado neste caso. Para obter mais informações, consulte o manual de Instalação/Ligações XDP-210EQ, etc.*
- *Para obter mais informações sobre a ligação, consulte o manual de Instalação/ Ligações do XDP-210EQ, etc. (não fornecido)*



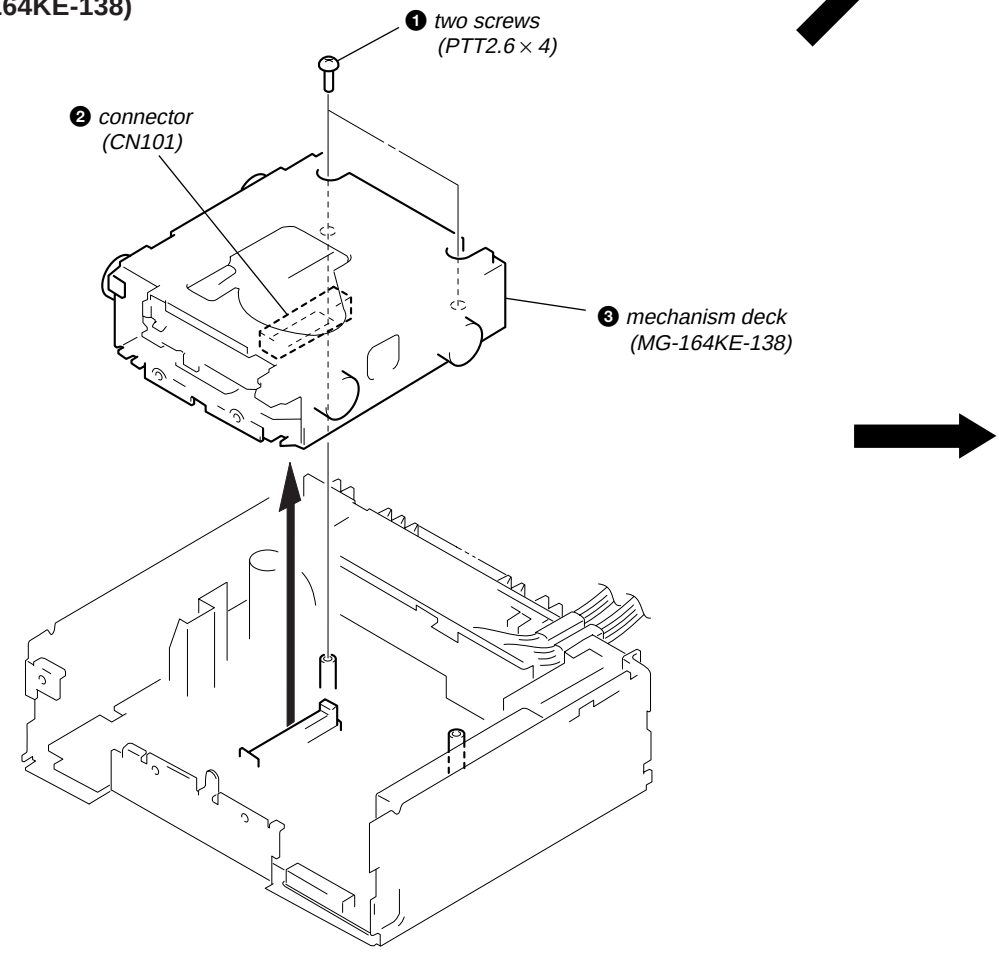
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

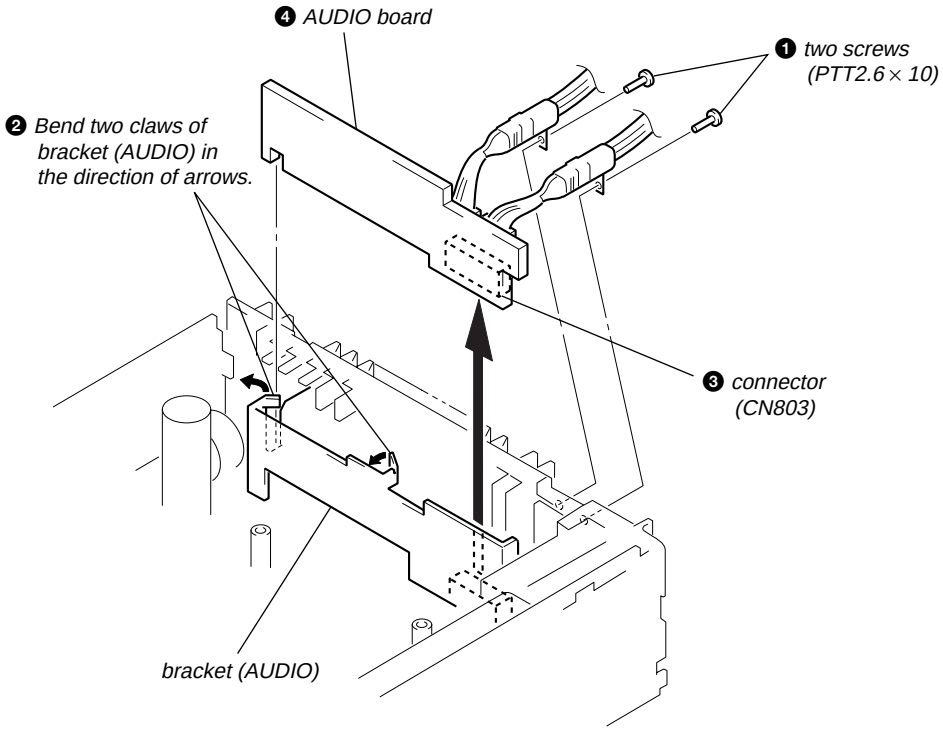
SUB PANEL ASS'Y



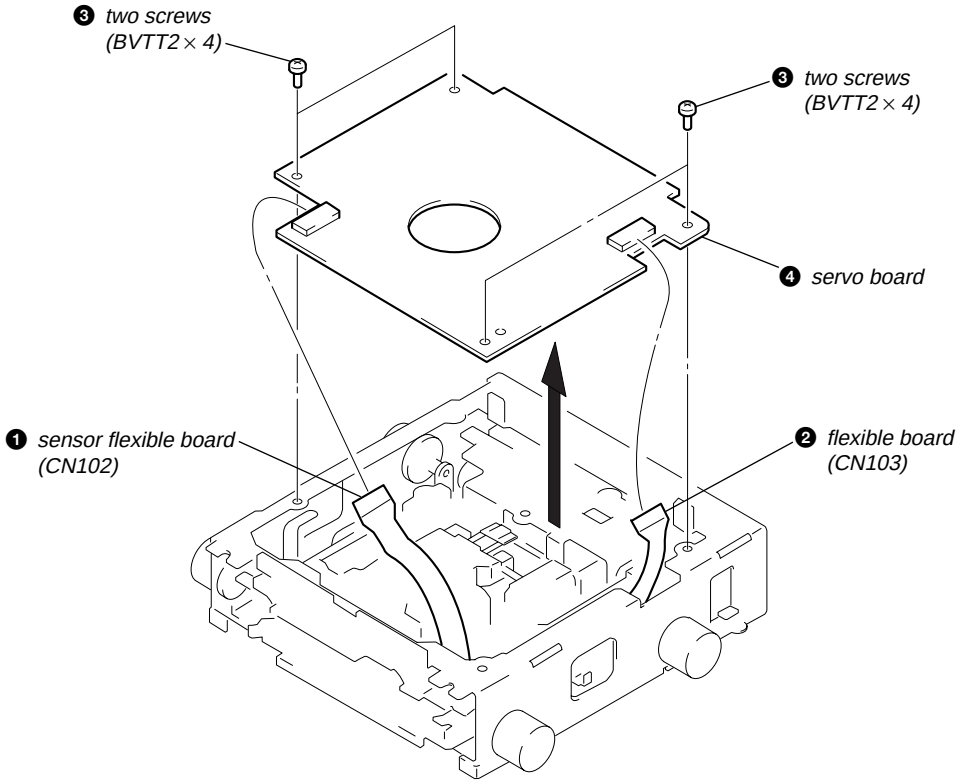
MECHANISM DECK (MG-164KE-138)



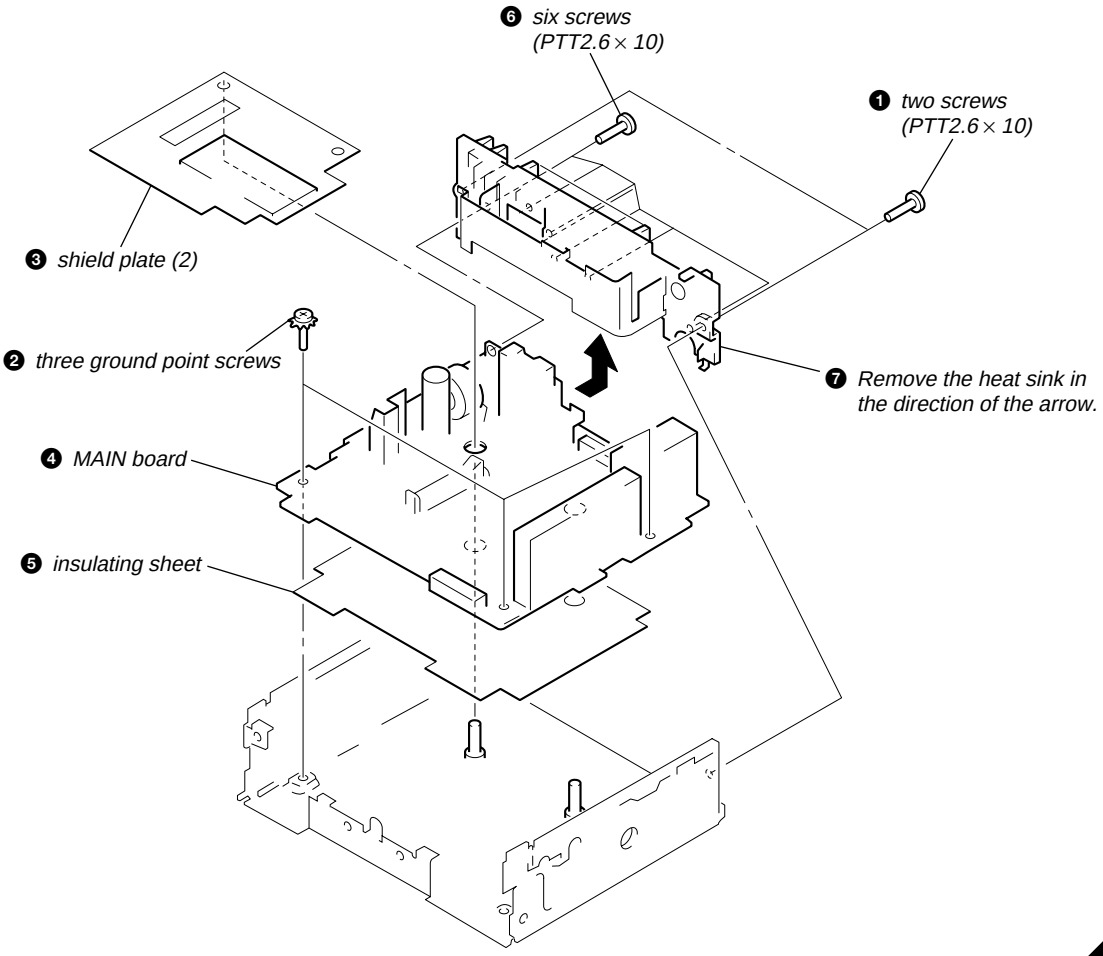
AUDIO BOARD



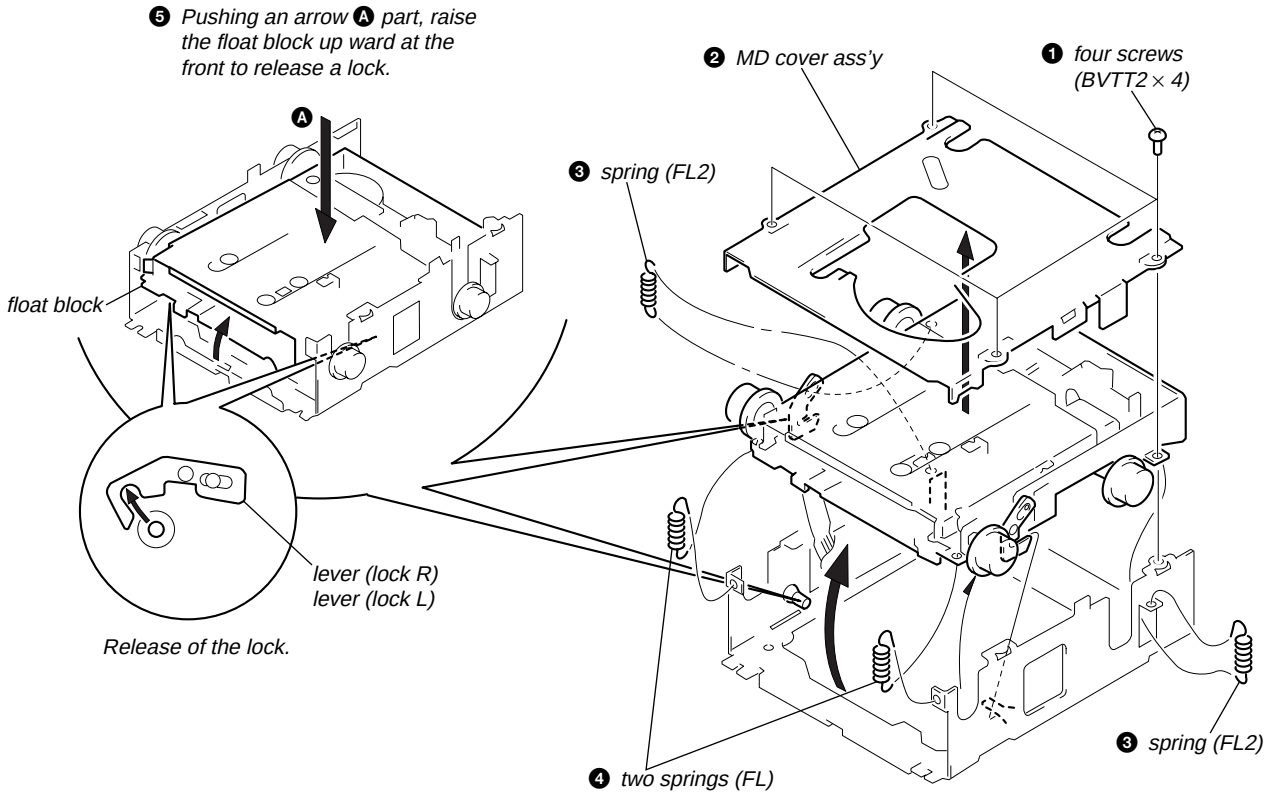
SERVO BOARD



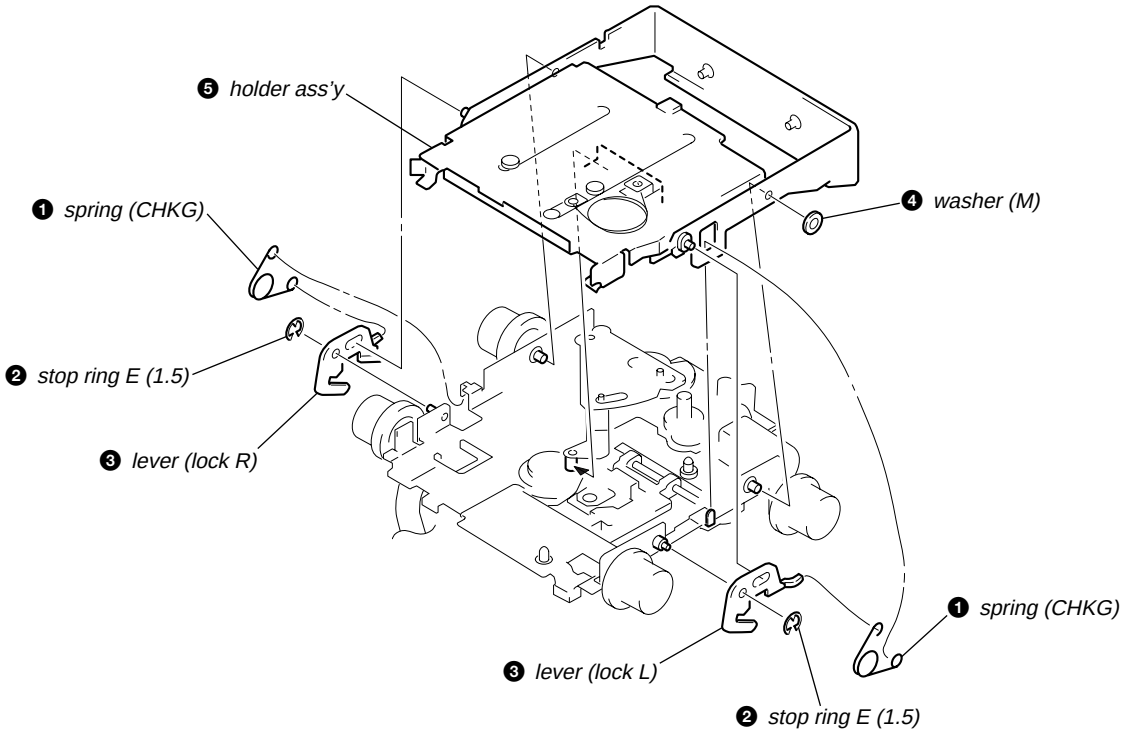
MAIN BOARD



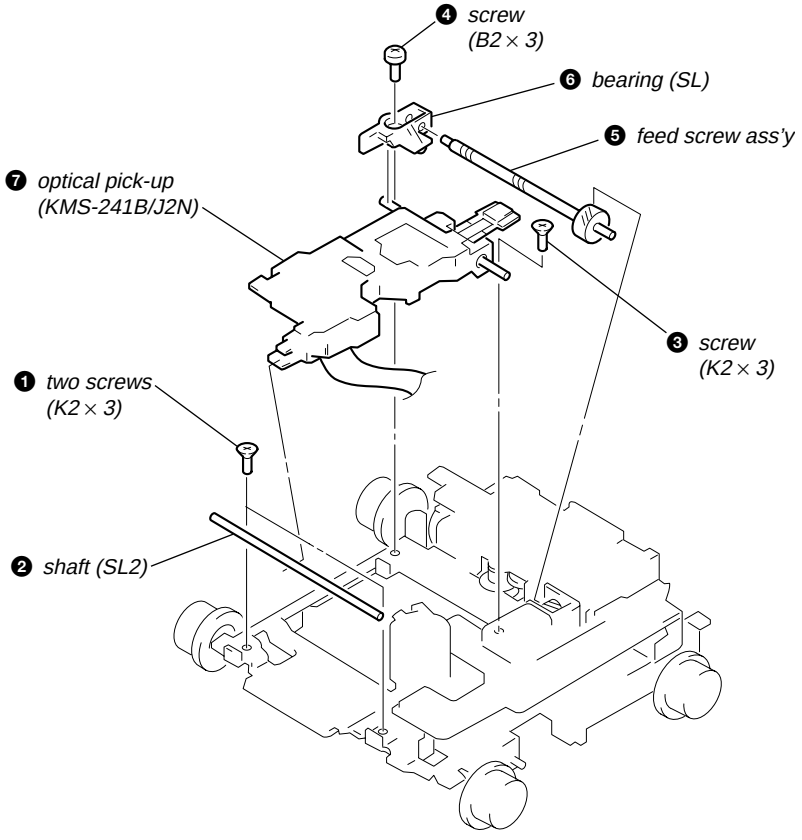
FLOAT BLOCK



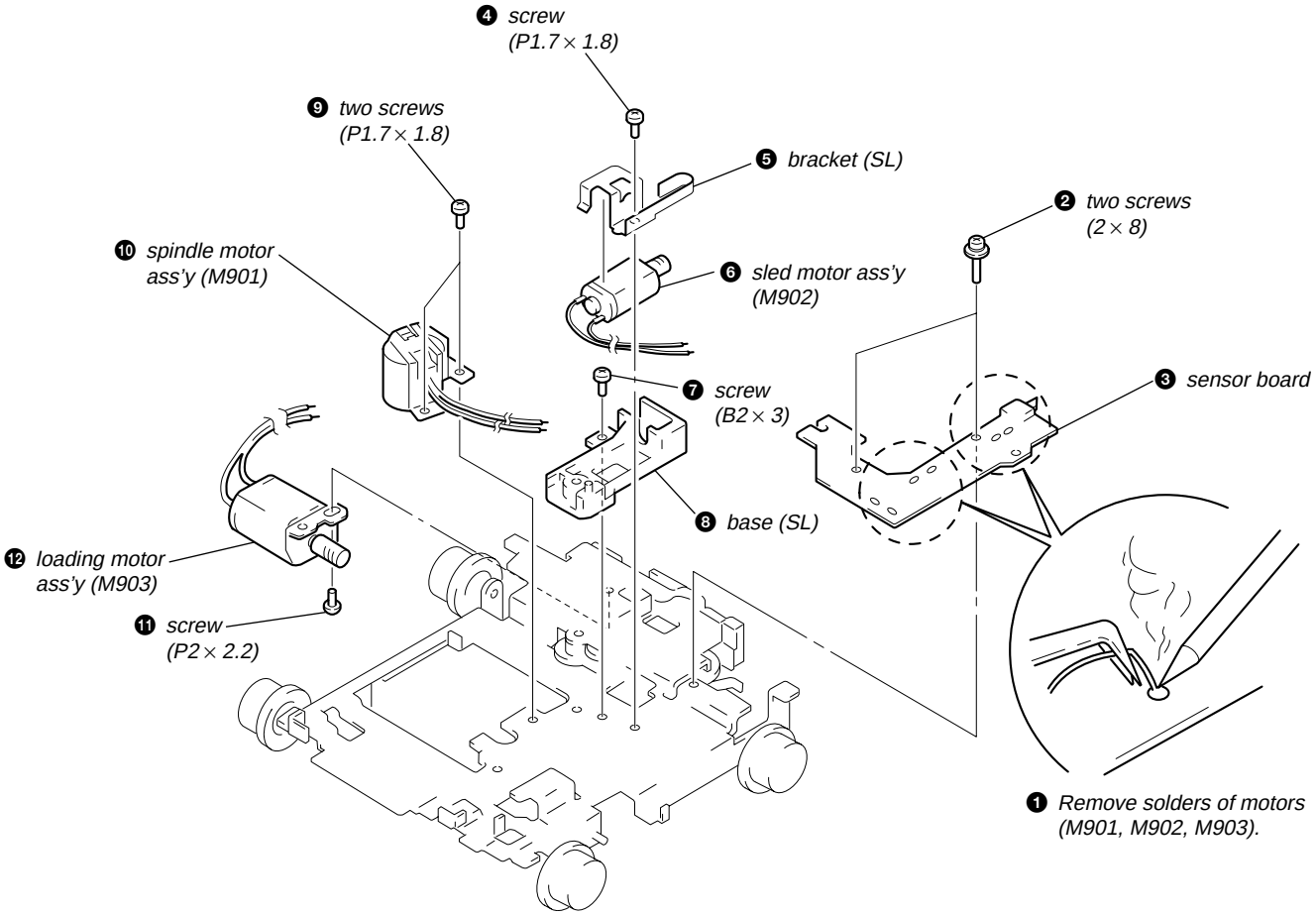
HOLDER ASS'Y



OPTICAL PICK-UP (KMS-241B/J2N)



MOTOR ASS'Y (M901, M902, M903), SENSOR BOARD


❹ screw (P1.7 × 1.8)
❾ two screws (P1.7 × 1.8)
❺ bracket (SL)
❷ two screws (2 × 8)
❿ spindle motor ass'y (M901)
❻ sled motor ass'y (M902)
❸ sensor board
❼ screw (B2 × 3)
❽ base (SL)
⓬ loading motor ass'y (M903)
⓫ screw (P2 × 2.2)
❶ Remove solders of motors (M901, M902, M903).

SECTION 3
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and MW Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>

1. Set the "power select" switch (SW500) is "A (ON)" position.
2. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
   Note: Press the [OFF] button, if the clock is not displayed.
3. Push the preset [4] button.
4. Push the preset [5] button.
5. Press the preset [1] button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the [OFF] button.
2. Return the "power select" switch (SW500) to initially set position.

See the adjustment location from on page 28 for the adjustment.

MD SECTION

MD section adjustments are done automatically in this set.

TUNER SECTION

0 dB=1µV

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

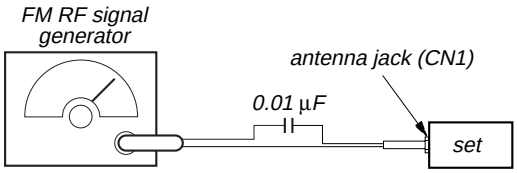
Note: Adjust the tuner section in the sequence shown below.

1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment (Wide)
3. FM Stereo Separation Adjustment (Narrow)
4. FM RDS S-Meter Adjustment
5. MW Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting:

[SOURCE] button : FM

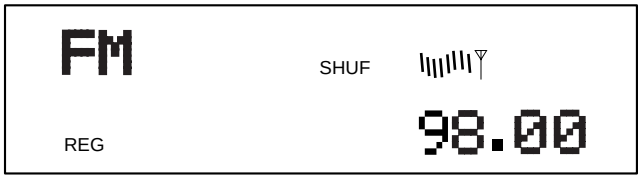


Carrier frequency : 98.00 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure:

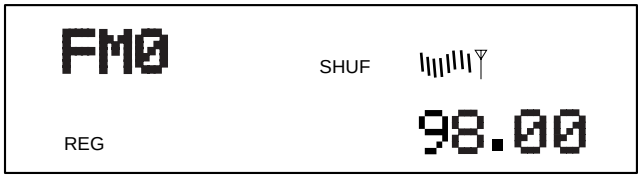
1. Set to the test mode.
2. Push the [SOURCE] button and set to FM.

Display



3. Adjust the volume RV2 on TU1 by turning clockwise untill "0" is shown next to "FM" on the display window, If "0" is already shown or the volume RV2 has been turned too far, turn it back counterclockwise untill "0" is disappeared once, then try this adjustment.

Display

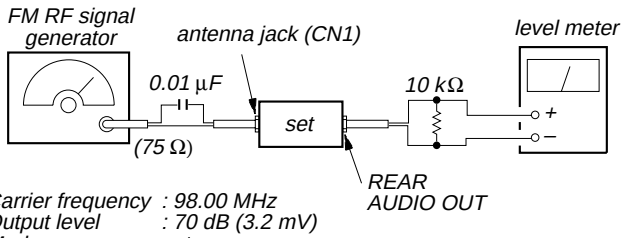


Adjustment Location: See page 28.

FM Stereo Separation Adjustment (Wide)

Setting:

SOURCE button : FM



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 33.75 kHz deviation (45%)
sub : 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

1. Adjust the volume RV3 on FM/AM tuner unit (TU1) for the best separation.

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
L-CH	R-CH	Ⓑ Adjust RV3 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
R-CH	L-CH	Ⓓ

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

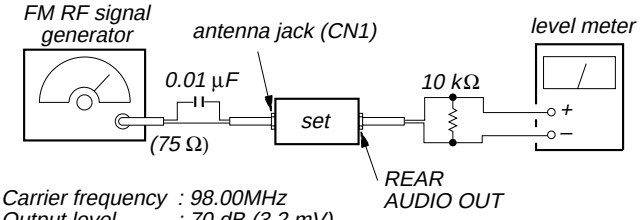
Specification: Separation more than 24 dB

Adjustment Location: See page 28.

FM Stereo Separation Adjustment (Narrow)

Setting:

SOURCE button : FM



Carrier frequency : 98.00MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 20 kHz deviation (26.5%)
sub : 1 kHz, 20 kHz deviation (26.5%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

1. Push the SHIFT button.
2. Push the 4 button four times.
3. Push the 5 button twice and set to narrow mode.
4. Adjust the volume RV4 on FM/AM tuner unit (TU1) for the best separation.

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
L-CH	R-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
R-CH	L-CH	Ⓓ

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

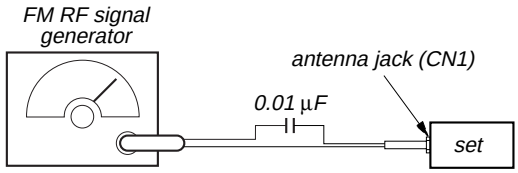
Specification: Separation more than 18 dB

Adjustment Location: See page 28.

FM RDS S-Meter Adjustment

Setting:

SOURCE button : FM

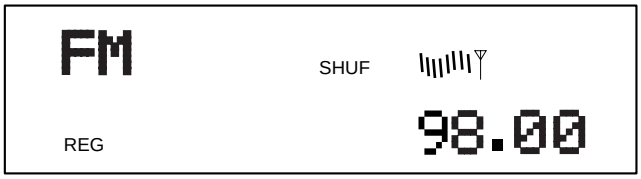


Carrier frequency : 98.00 MHz
Output level : 35 dB (56.2 µV)
Mode : mono
Modulation : no modulation

Procedure:

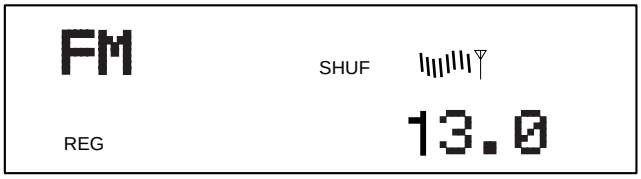
1. Set to the test mode. (See page 25.)
2. Push the SOURCE button and set to FM.

Display



3. Push the preset 10 button .
4. Adjust RV1 on MAIN board so that the display indication is “13.0”.

Display



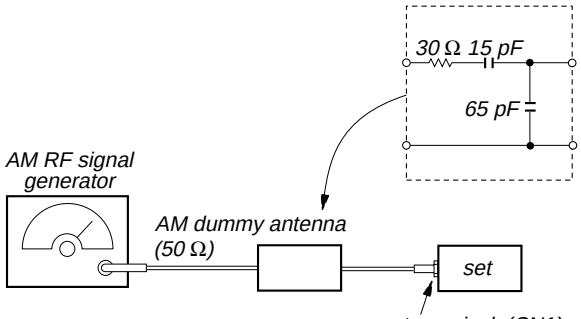
Specification: Display indication: 12.8 to 13.2.

Adjustment Location: See page 28.

MW Auto Scan/Stop Level Adjustment

Setting:

SOURCE → MODE button : MW

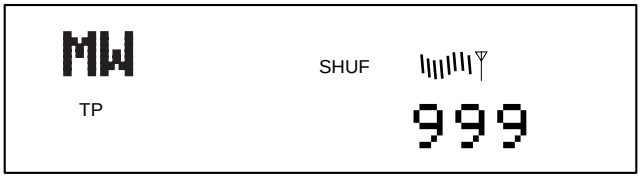


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

Procedure:

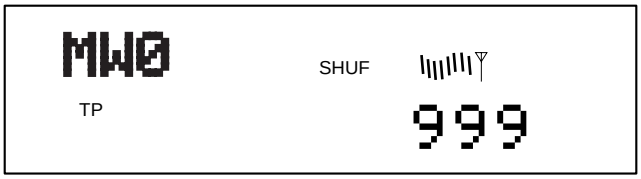
1. Set to the test mode. (See page 25.)
2. Push the SOURCE button and set to FM.
3. Push the MODE button and set to MW.

Display



4. Adjust the volume RV1 on TU1 by turning clockwise untill “0” is shown next to “MW” on the display window, If “0” is already shown or the volume RV1 has been turned too far, turn it back counterclockwise untill “0” is disappeared once, then try this adjustment.

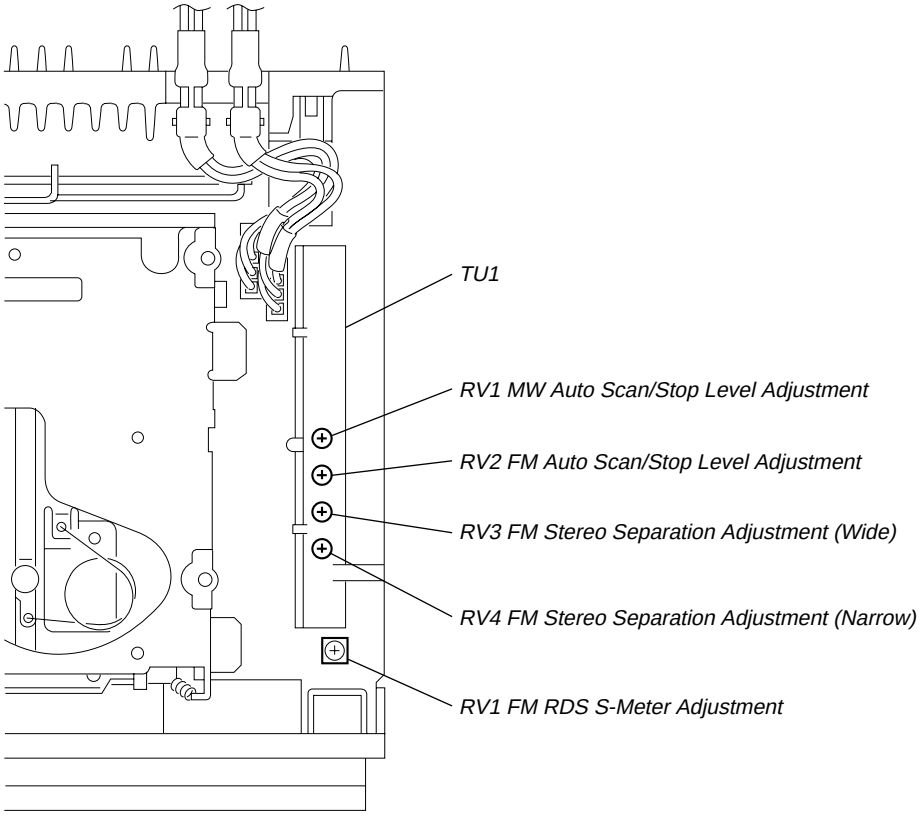
Display



Adjustment Location: See page 28.

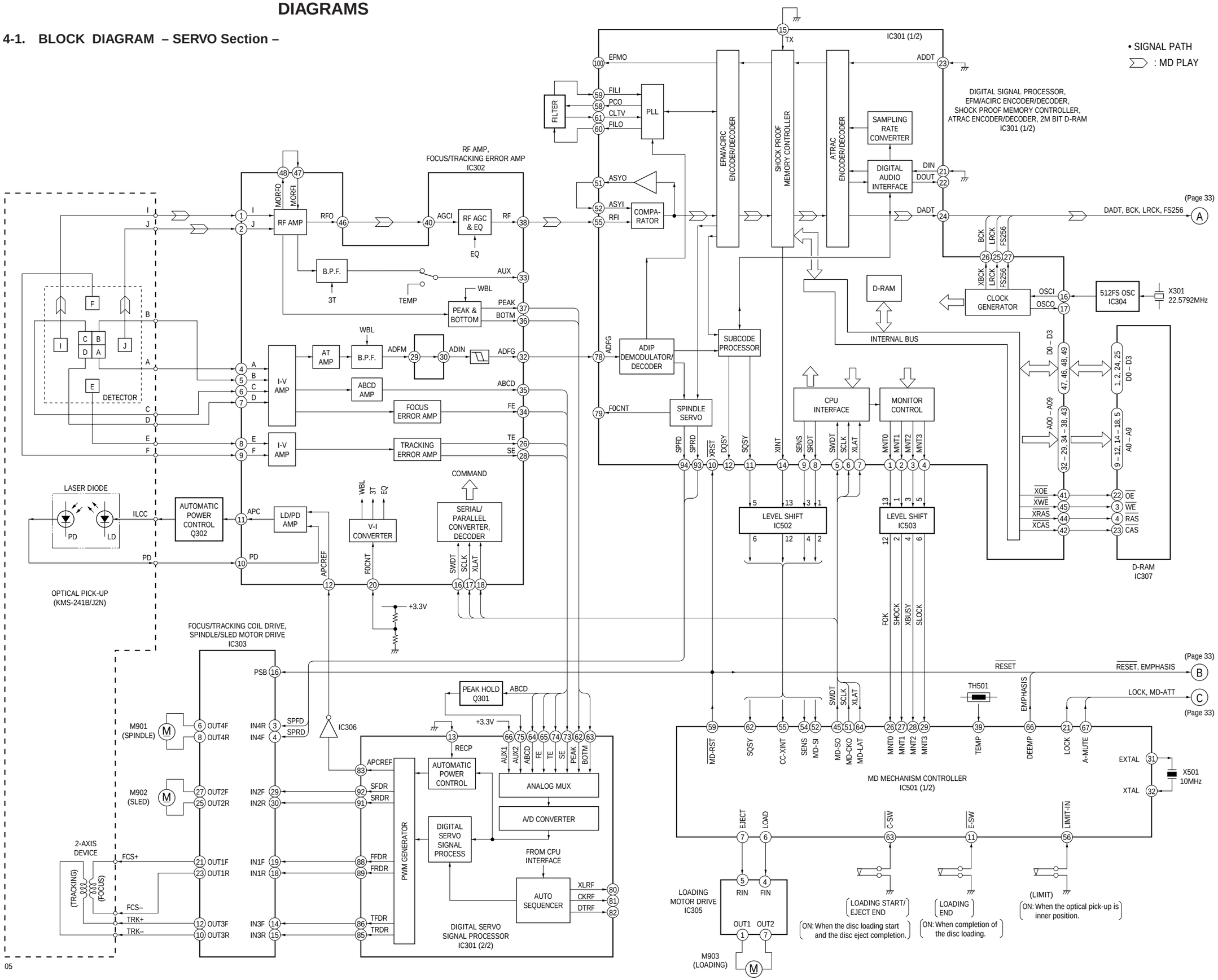
Adjustment Location:

– SET UPPER VIEW –

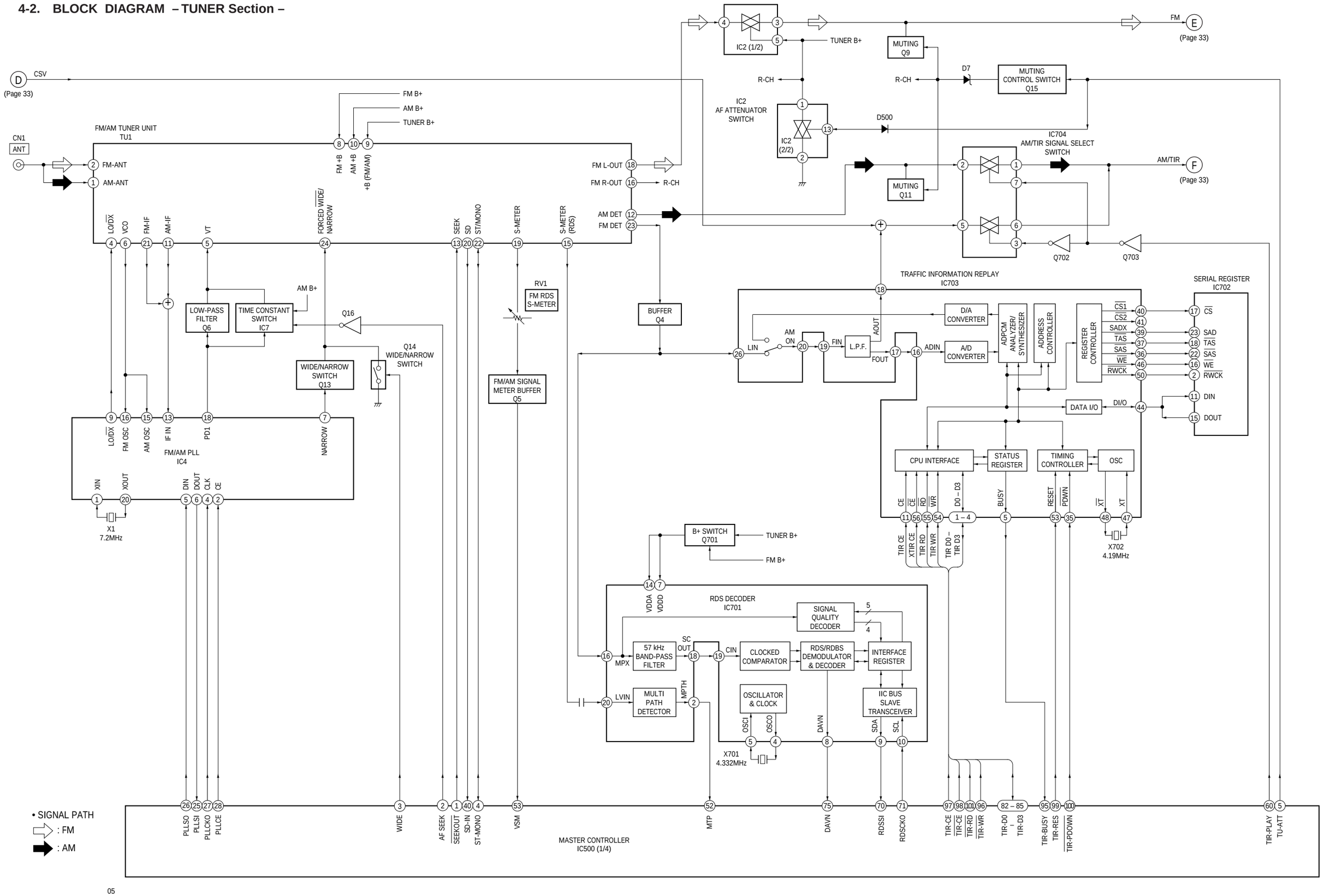

TU1
RV1 MW Auto Scan/Stop Level Adjustment
RV2 FM Auto Scan/Stop Level Adjustment
RV3 FM Stereo Separation Adjustment (Wide)
RV4 FM Stereo Separation Adjustment (Narrow)
RV1 FM RDS S-Meter Adjustment
Front

SECTION 4
DIAGRAMS

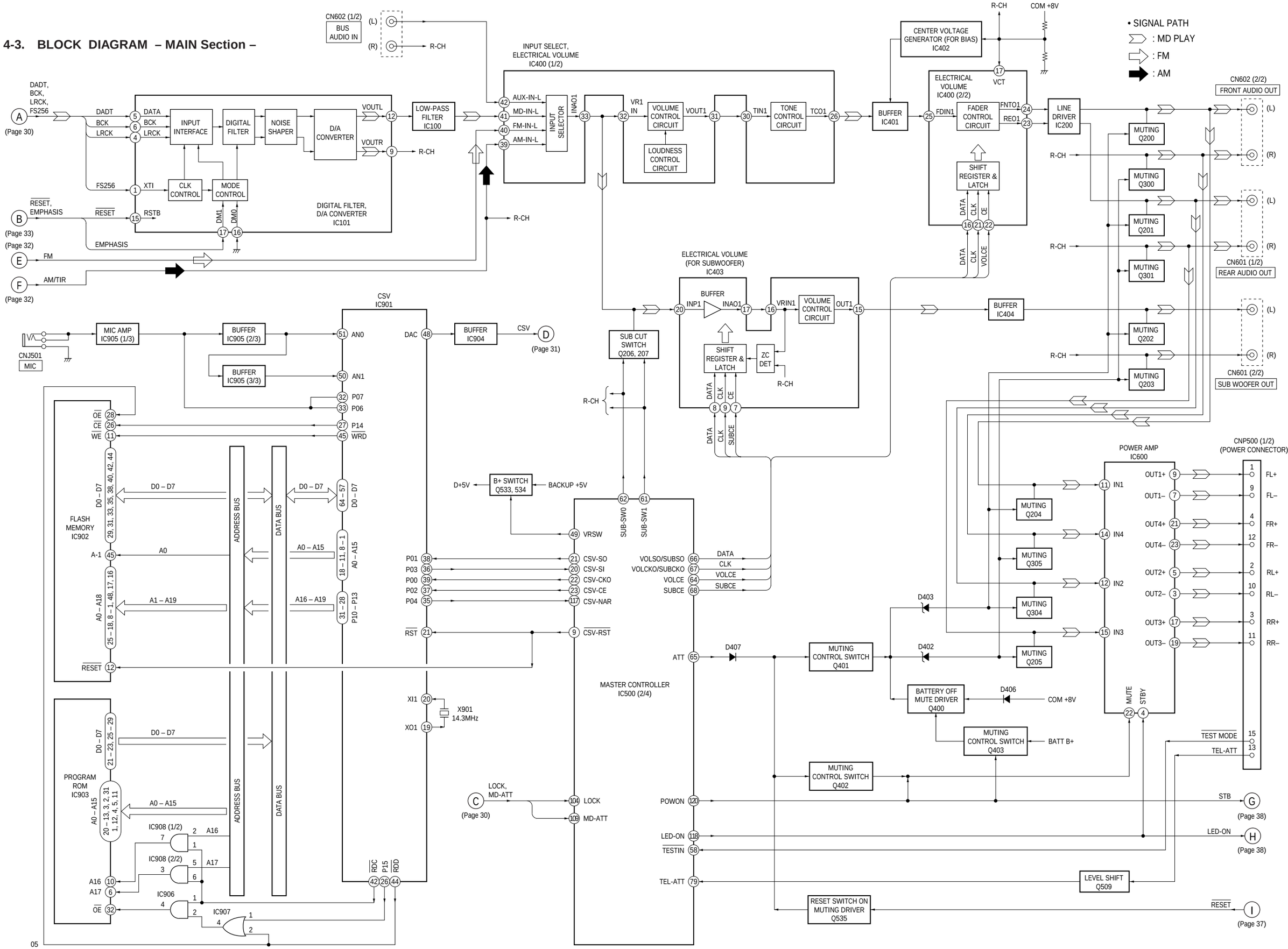
4-1. BLOCK DIAGRAM – SERVO Section –



4-2. BLOCK DIAGRAM – TUNER Section –

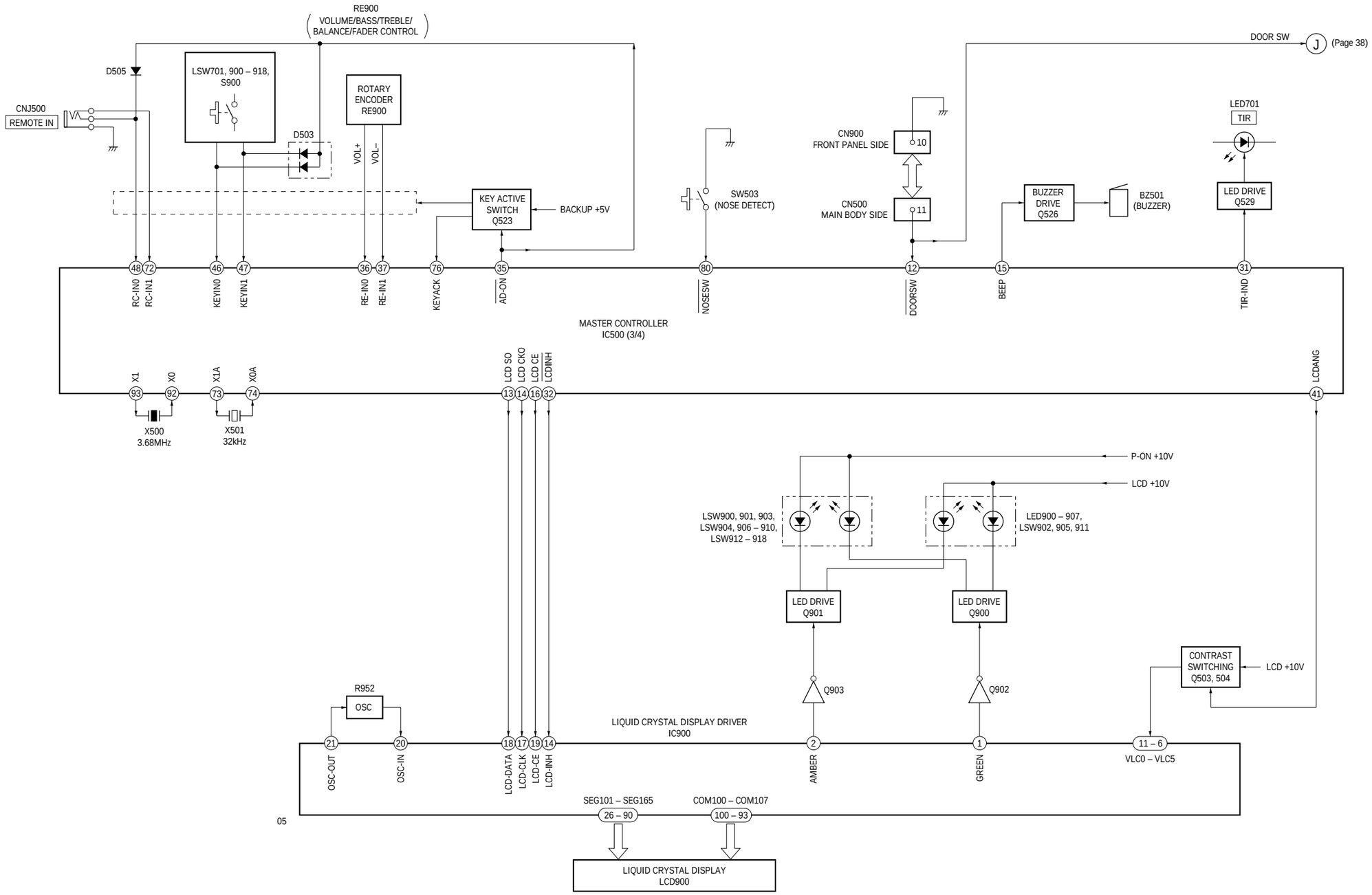


4-3. BLOCK DIAGRAM – MAIN Section –

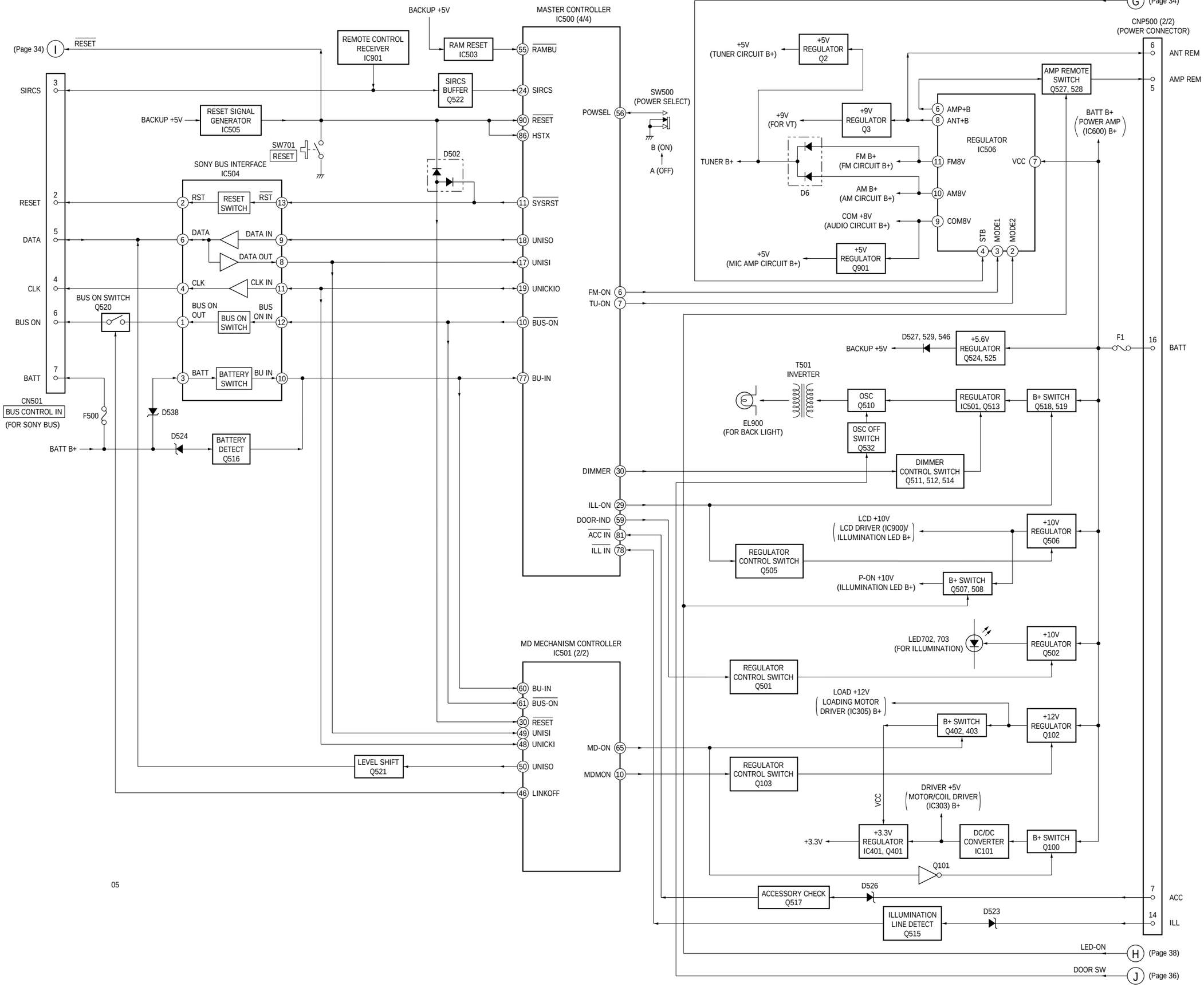


05

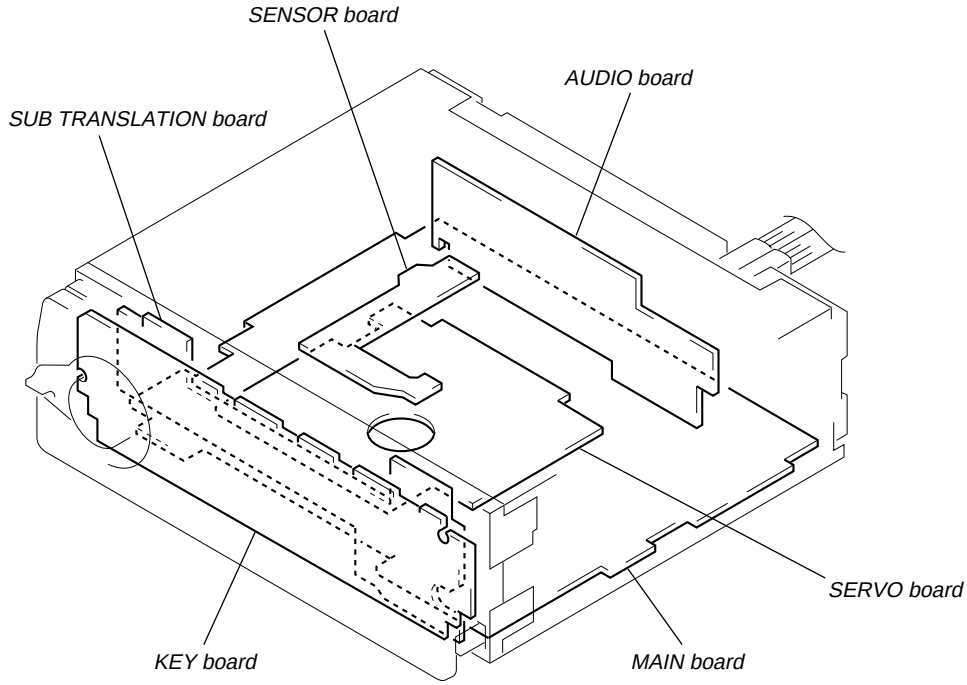
4-4. BLOCK DIAGRAM – DISPLAY/KEY CONTROL Section –



4-5. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



• Circuit Boards Location



4-6. NOTES FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B + : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  Σ : MD
- Abbreviation
  G : German

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

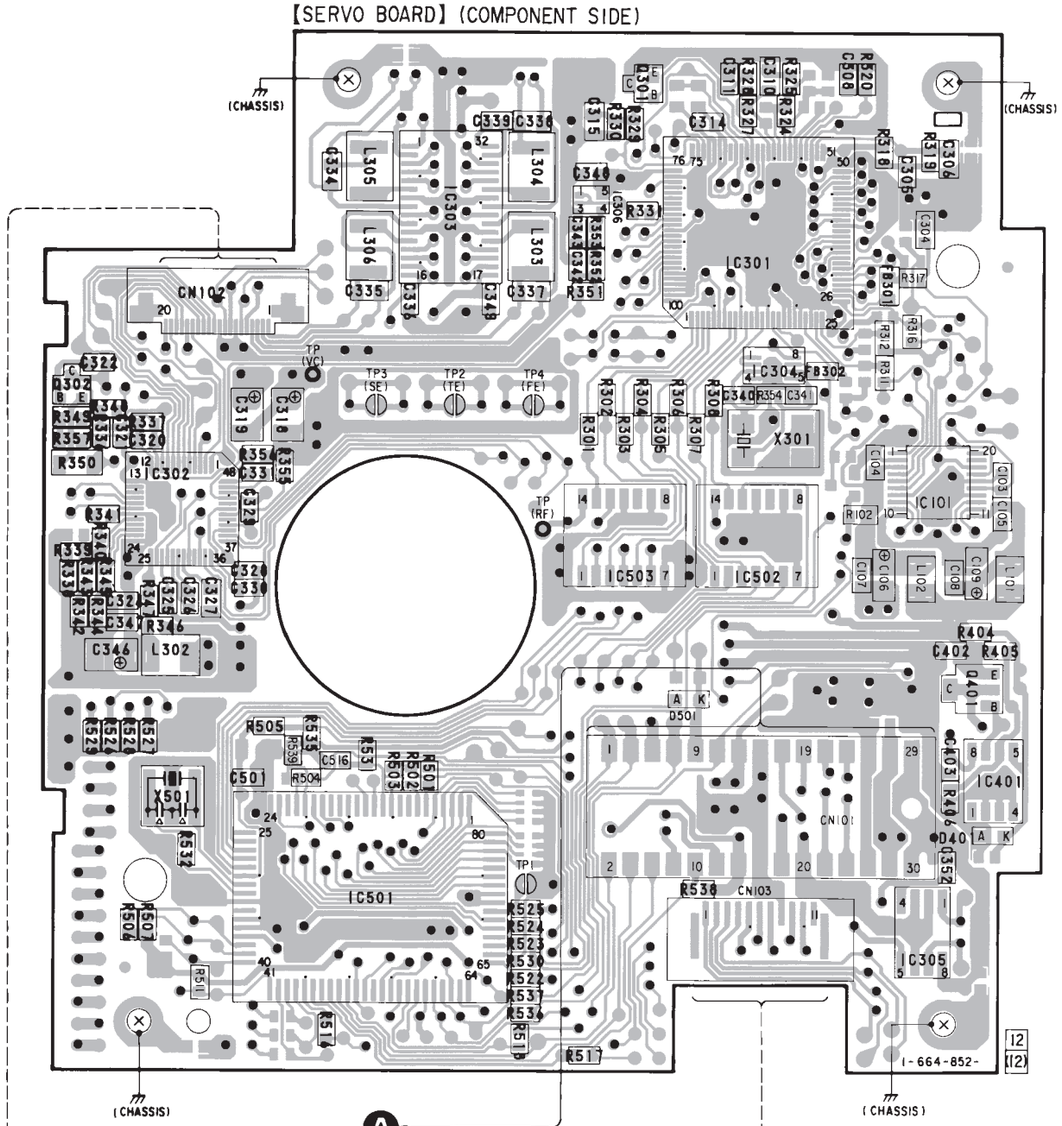
Caution:

Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

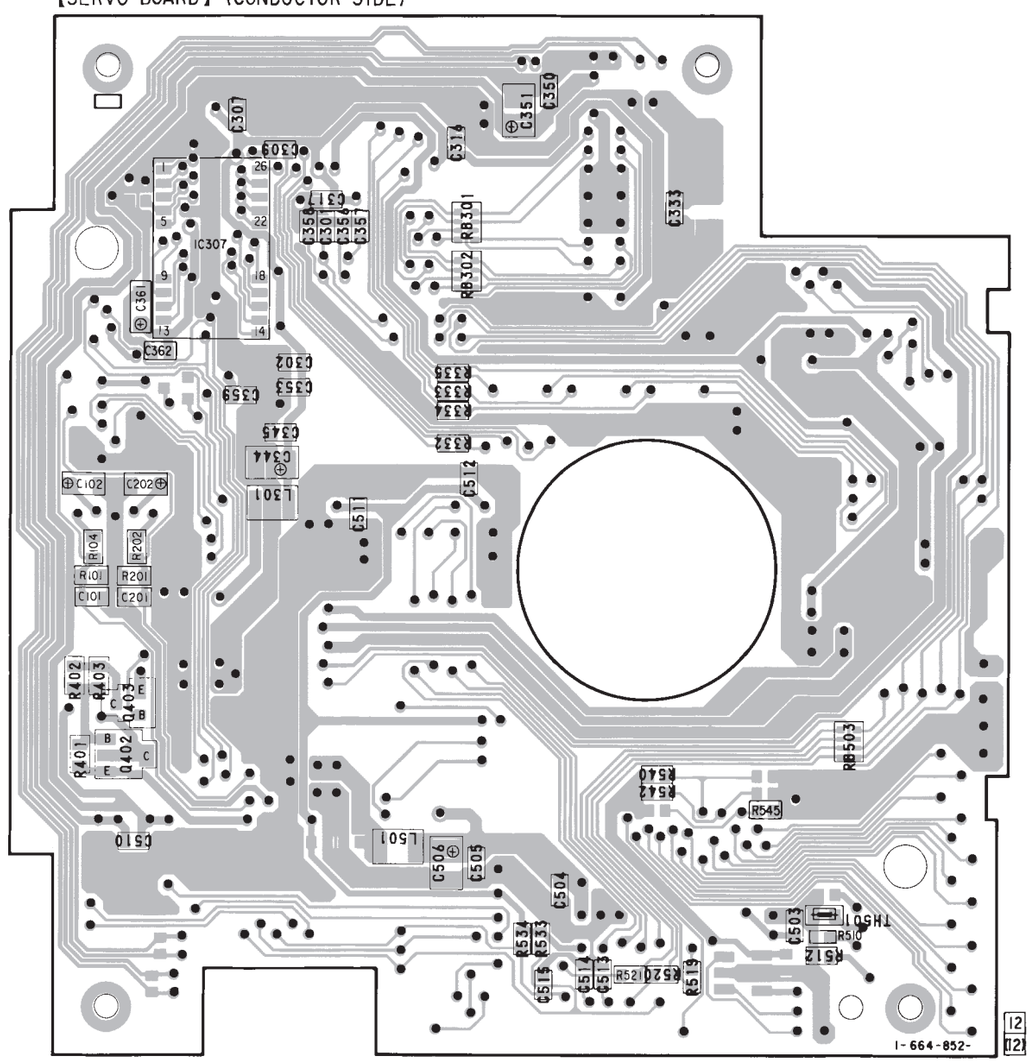
4-7. PRINTED WIRING BOARDS – SERVO Section –

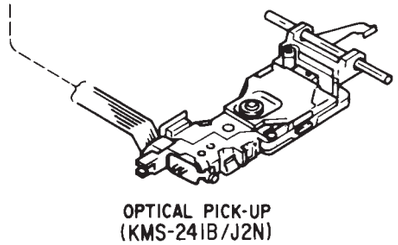
• See page 39 for Circuit Boards Location.

【SERVO BOARD】(COMPONENT SIDE)



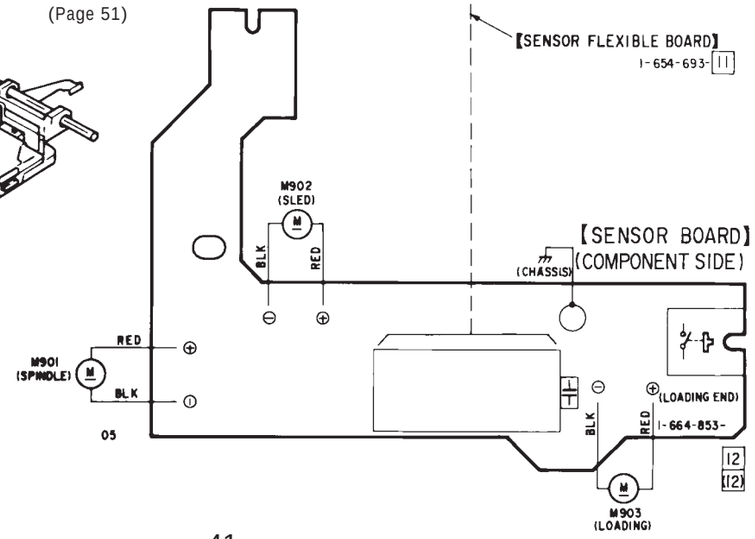
【SERVO BOARD】(CONDUCTOR SIDE)



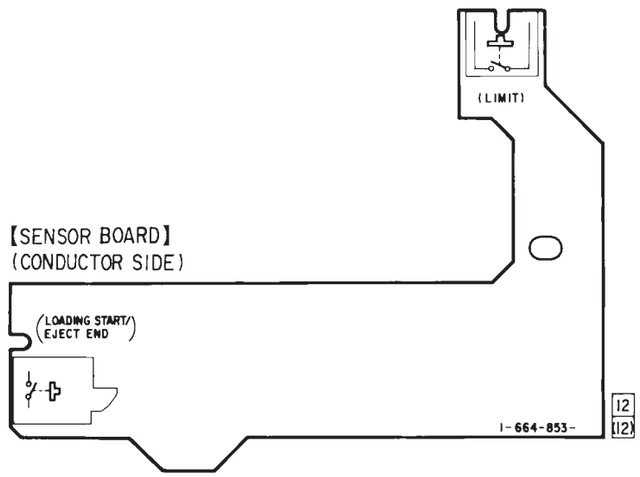


OPTICAL PICK-UP
(KMS-241B/J2N)

【SENSOR FLEXIBLE BOARD】
1-654-693-11



【SENSOR BOARD】
(CONDUCTOR SIDE)



• **Semiconductor Location**

Ref. No.	Location
D401	E-6
D501	E-4
IC301	B-5
IC302	C-2
IC303	B-3
IC304	C-5
IC305	F-6
IC306	B-4
IC307	B-8
IC401	E-6
IC501	F-3
IC502	D-5
IC503	D-4
Q301	A-4
Q302	C-1
Q401	D-6
Q402	E-7
Q403	E-7

4-8. SCHEMATIC DIAGRAM – SERVO Section (1/3) –

• See page 74 for IC Block Diagrams. • See page 72 for Waveforms.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- Voltages and waveforms are dc with respect to ground in playback mode.
  no mark : MD
  ∗ : Impossible to measure

【SERVO BOARD】(1/3)

⚠ OPTICAL PICK-UP (KMS-241B/J2N)

CN102 20P

20	VCC
19	J
18	B
17	A
16	VC
15	I
14	F
13	C
12	D
11	E
10	VEE
9	ILCC
8	LD-GND
7	VR (RM-GND)
6	RM
5	NC
4	FCS-
3	FCS+
2	TRK-
1	TRK+

CN103 11P

1	SP-
2	SP+
3	SL+
4	SL-
5	LO+
6	LO-
7	C-SW
8	GND
9	E-SW
10	IN-LIMIT
11	NC

【SENSOR BOARD】

【SENSOR FLEXIBLE BOARD】

IC302 RF AMP, FOCUS/TRACKING ERROR AMP
IC302 CXA2523R

IC303 SLED/SPINDLE MOTOR DRIVE, FOCUS/TRACKING COIL DRIVE
IC303 BH6511FS-E2

IC305 LOADING MOTOR DRIVE
IC305 BA6287F-T1

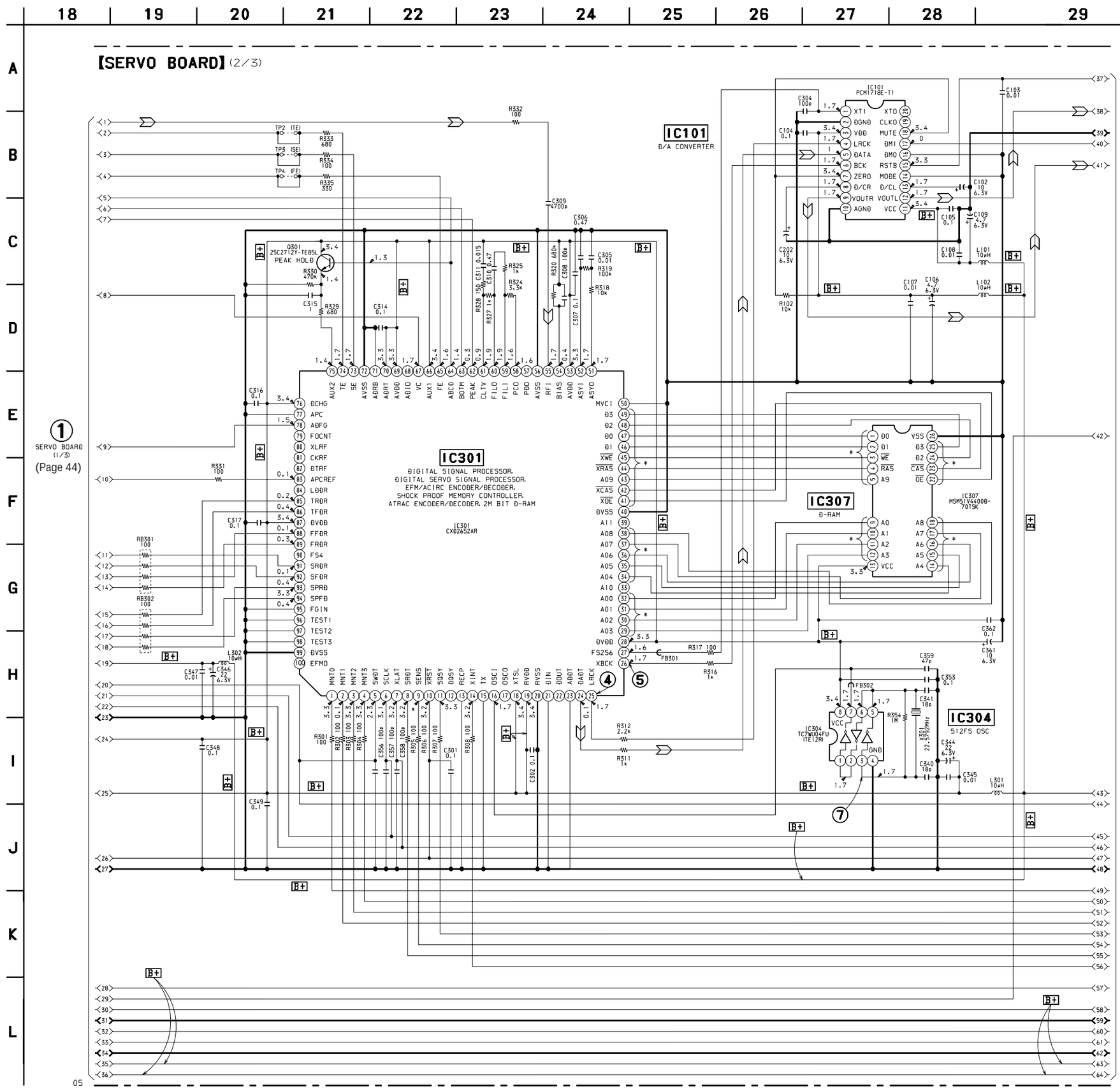
IC306 LASER APC SWITCH
IC306 TC7S08FU (TE85R)

Q302 2SA1037AK-T146 QR AUTOMATIC POWER CONTROL

① SERVO BOARD (2/3) (Page 45)

4-9. SCHEMATIC DIAGRAM – SERVO Section (2/3) –

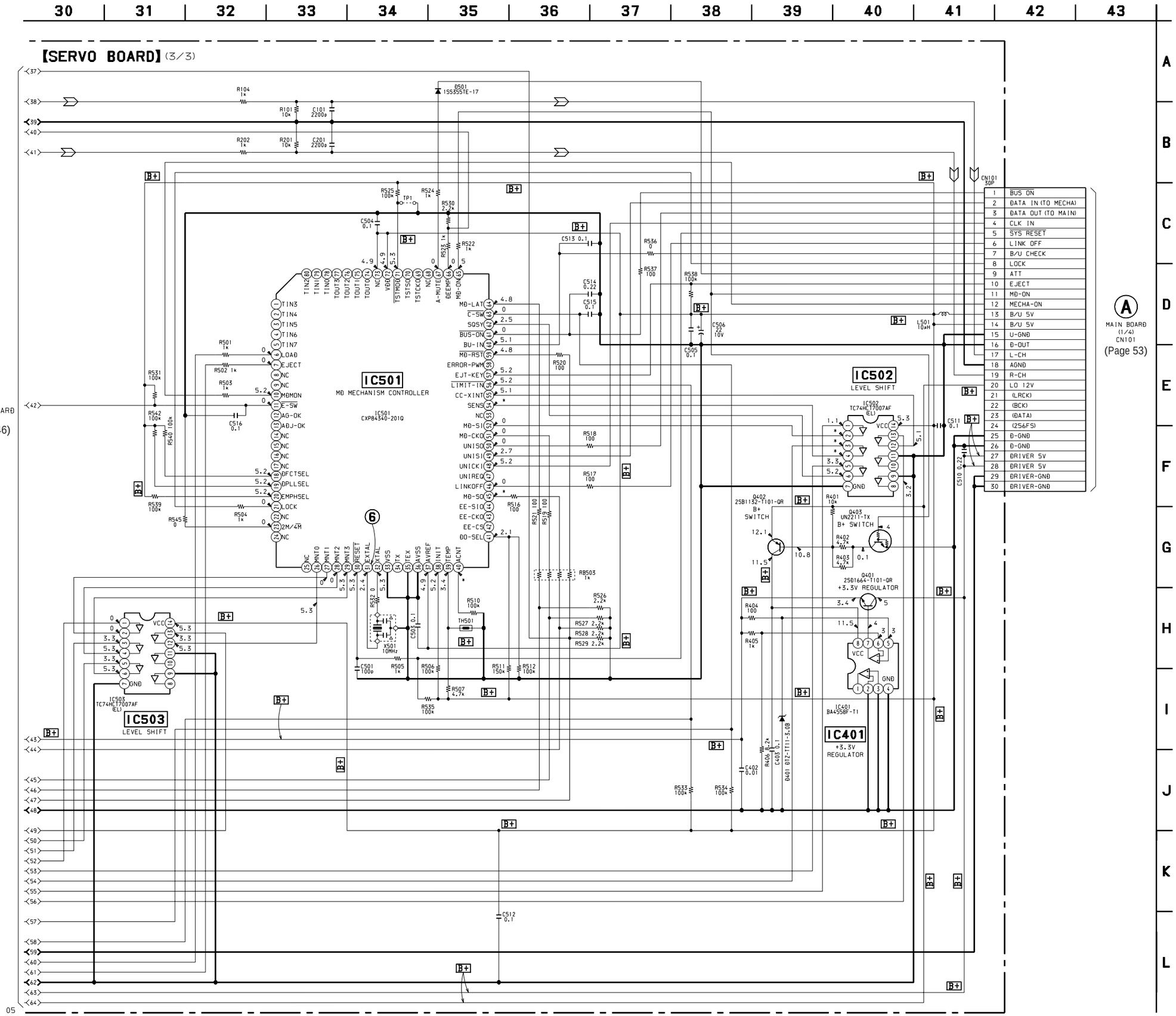
• See pages 74 for IC Block Diagrams. • See page 72 for Waveforms.



- Voltages and waveforms are dc with respect to ground in playback mode.
  no mark : MD
  ∗ : Impossible to measure

4-10. SCHEMATIC DIAGRAM – SERVO Section (3/3) – • See page 72 for Waveforms.

• Voltages and waveforms are dc with respect to ground in playback mode.
no mark : MD
∗ : Impossible to measure

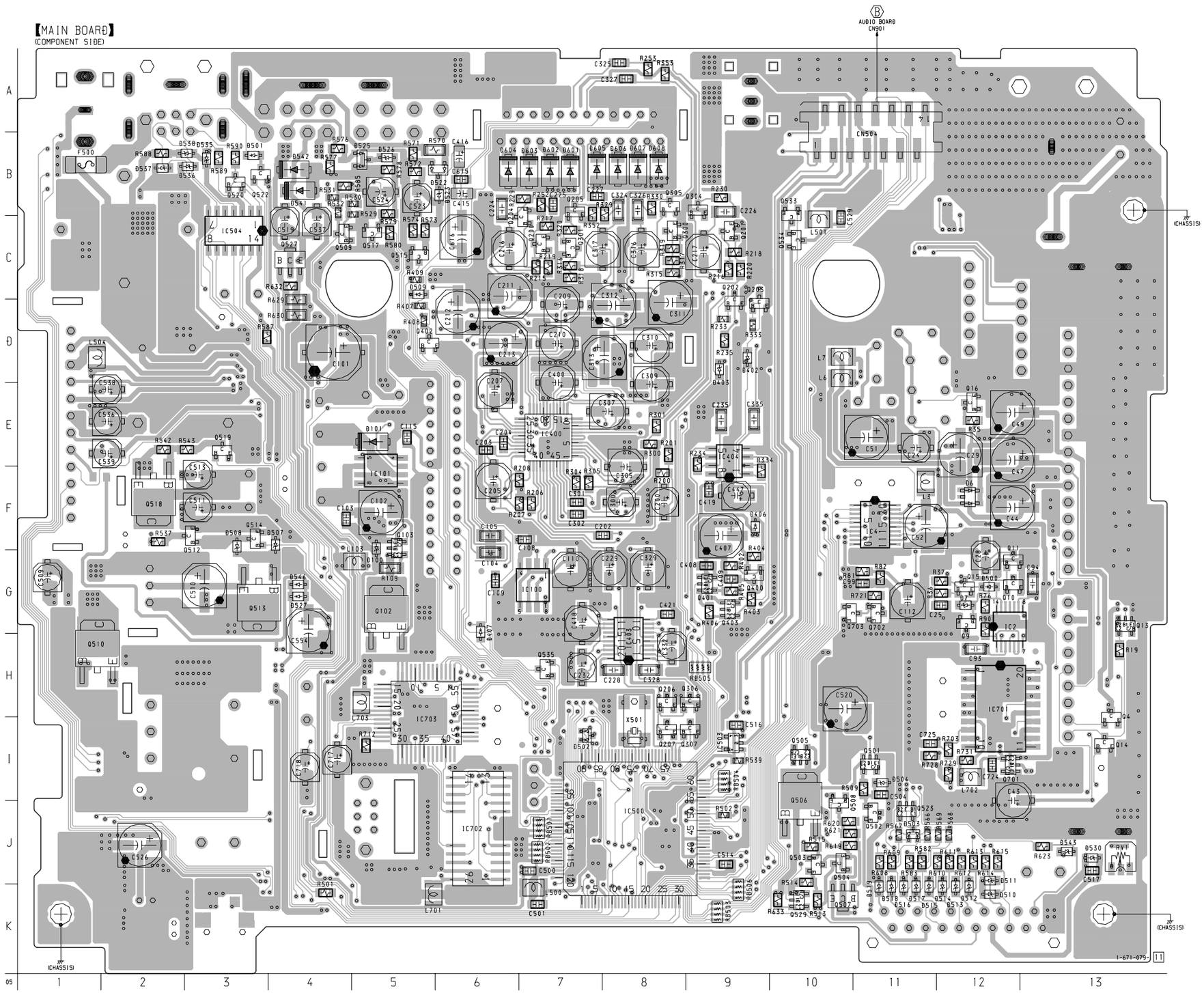


4-11. PRINTED WIRING BOARD – MAIN Board (Component Side) – • See page 39 for Circuit Boards Location.

• **Semiconductor Location (Component Side)**

Ref. No.	Location	Ref. No.	Location
D6	F-12	IC702	J-6
D7	G-12	IC703	H-5
D100	G-5		
D101	E-5	Q4	H-13
D402	D-9	Q9	G-12
D403	D-9	Q10	G-12
D406	F-9	Q11	G-12
D407	G-6	Q13	G-13
D500	G-12	Q14	I-13
D501	B-3	Q15	G-12
D502	I-7	Q16	E-12
D503	J-11	Q102	G-5
D504	I-11	Q103	F-5
D507	F-4	Q200	C-7
D508	F-3	Q201	C-9
D509	C-5	Q202	D-9
D510	K-12	Q203	D-9
D511	J-12	Q204	C-7
D512	K-12	Q205	B-7
D513	K-12	Q206	H-8
D514	K-12	Q207	I-8
D515	K-11	Q300	C-8
D516	K-11	Q301	C-7
D517	K-11	Q304	B-9
D518	K-11	Q305	B-8
D519	K-11	Q306	H-9
D522	B-6	Q307	I-9
D523	B-6	Q400	G-9
D525	B-5	Q401	G-9
D526	B-5	Q402	D-5
D527	G-4	Q403	G-9
D530	J-13	Q501	I-11
D535	B-3	Q502	J-11
D536	B-3	Q503	J-10
D537	B-2	Q504	J-10
D538	B-3	Q505	I-10
D541	B-4	Q506	J-10
D542	B-4	Q507	K-10
D543	J-13	Q508	J-10
D546	G-4	Q509	C-4
D601	B-7	Q510	H-1
D602	B-7	Q512	F-3
D603	B-7	Q513	G-3
D604	B-6	Q514	F-3
D605	B-7	Q515	C-5
D606	B-8	Q517	C-5
D607	B-8	Q518	F-2
D608	B-8	Q519	E-3
		Q520	B-3
IC2	G-12	Q522	B-3
IC4	F-11	Q523	J-11
IC100	G-7	Q527	C-4
IC101	F-5	Q529	K-10
IC400	E-7	Q533	B-10
IC403	H-8	Q534	C-10
IC404	E-9	Q535	H-7
IC500	J-8	Q701	I-12
IC503	I-9	Q702	G-11
IC504	C-3	Q703	G-11
IC701	H-12		

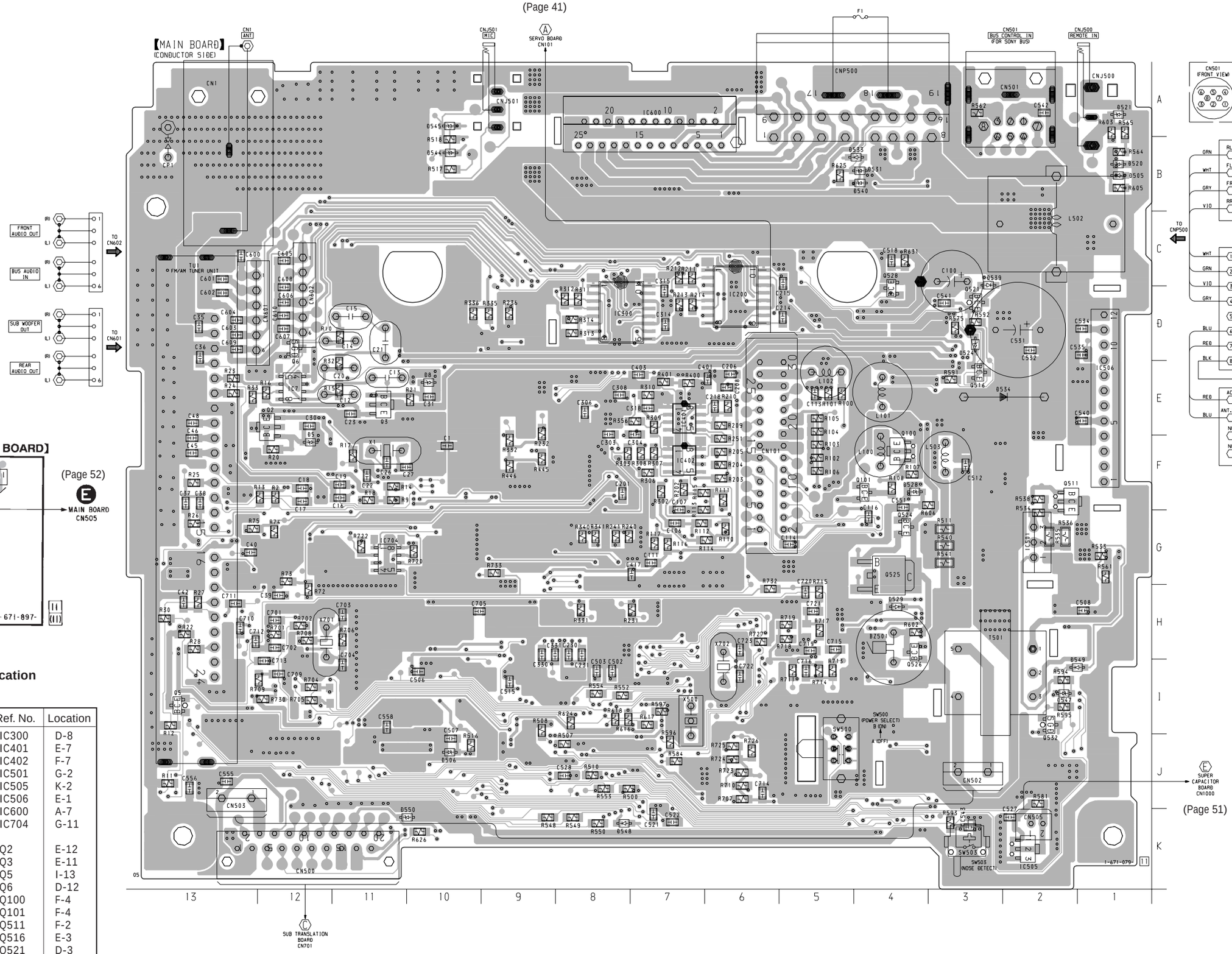
(Page 61)



4-12. PRINTED WIRING BOARDS – MAIN Board (Conductor Side) /SUPER CAPACITOR Board – • See page 39 for Circuit Boards Location.

(Page 41)

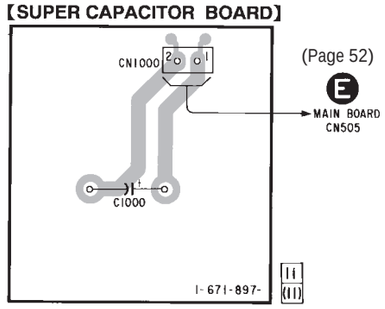
【MAIN BOARD】
(CONDUCTOR SIDE)



(Page 70)

(Page 51)

【SUPER CAPACITOR BOARD】

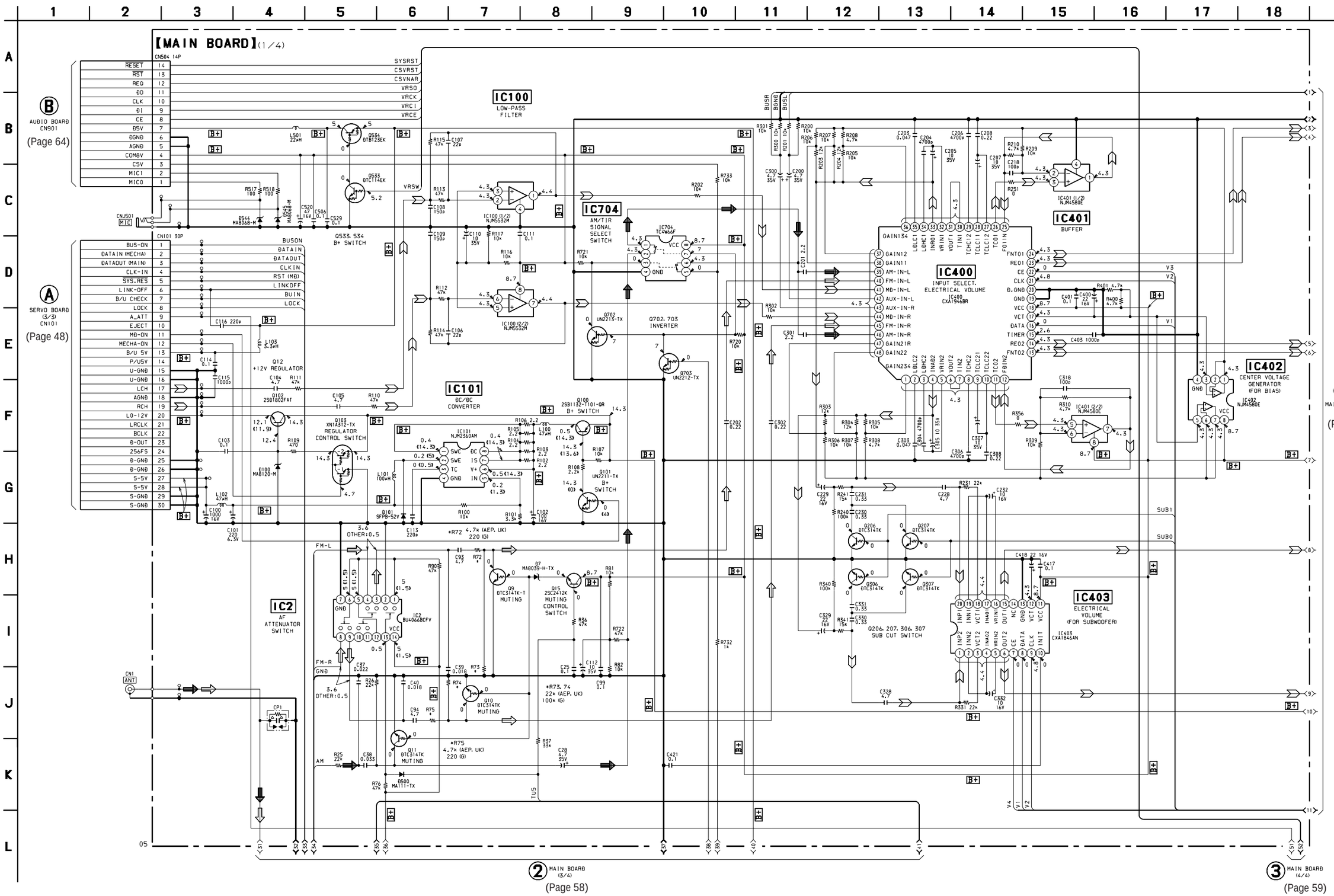


(Page 52)

- **Semiconductor Location (Conductor Side)**

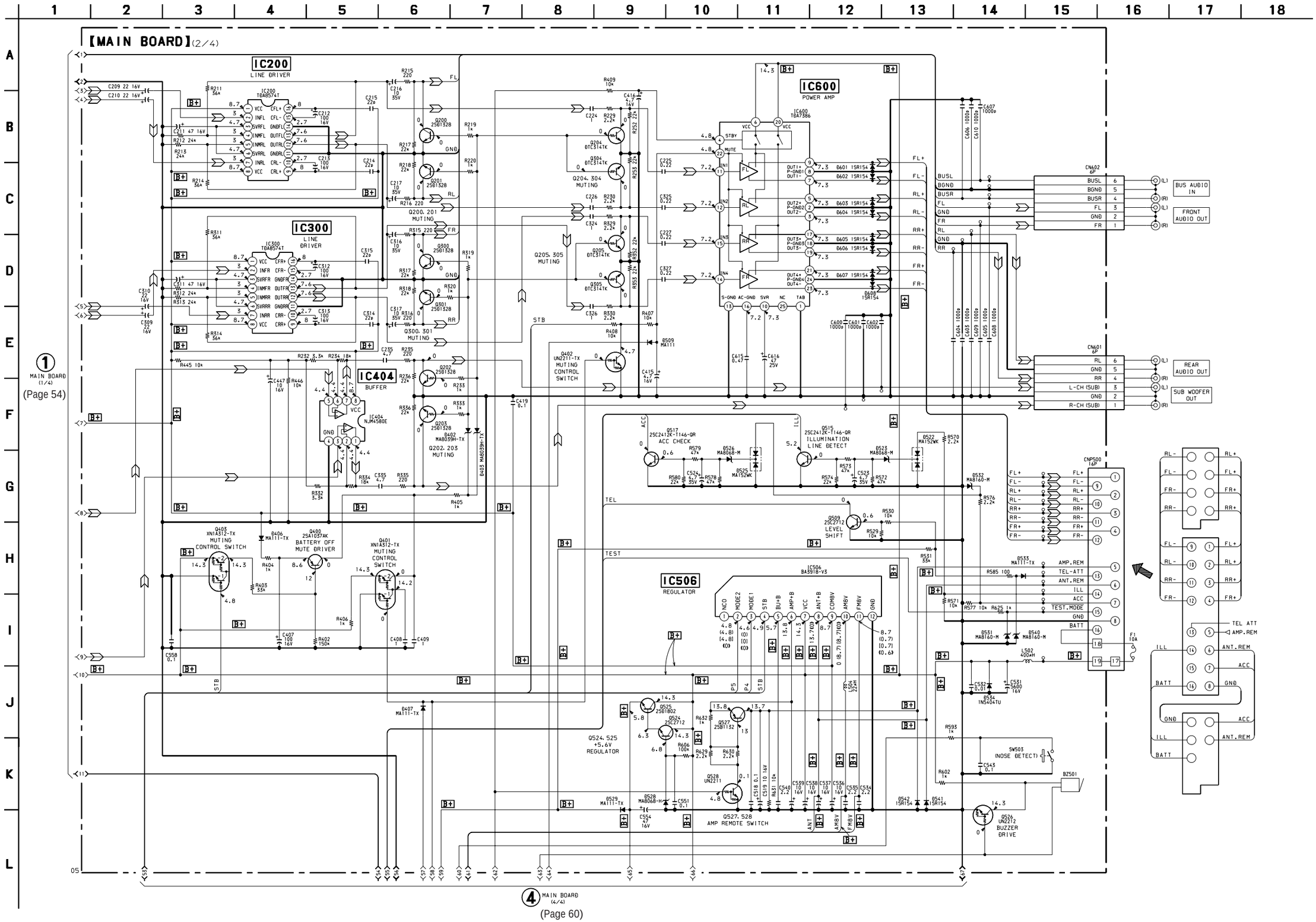
Ref. No.	Location	Ref. No.	Location
D5	F-12	IC300	D-8
D8	E-10	IC401	E-7
D505	B-1	IC402	F-7
D506	J-10	IC501	G-2
D520	B-1	IC505	K-2
D521	A-1	IC506	E-1
D524	D-3	IC600	A-7
D528	F-4	IC704	G-11
D529	H-4		
D531	B-4	Q2	E-12
D533	B-4	Q3	E-11
D534	E-2	Q5	I-13
D539	C-3	Q6	D-12
D540	B-4	Q100	F-4
D544	B-10	Q101	F-4
D545	A-10	Q511	F-2
D547	I-2	Q516	E-3
D548	K-8	Q521	D-3
D549	I-1	Q524	G-4
D550	K-10	Q525	G-4
		Q526	H-4
IC7	E-12	Q528	D-4
IC200	D-6	Q532	I-2

4-13. SCHEMATIC DIAGRAM – MAIN Section (1/4) – • See pages 77 for IC Block Diagrams.



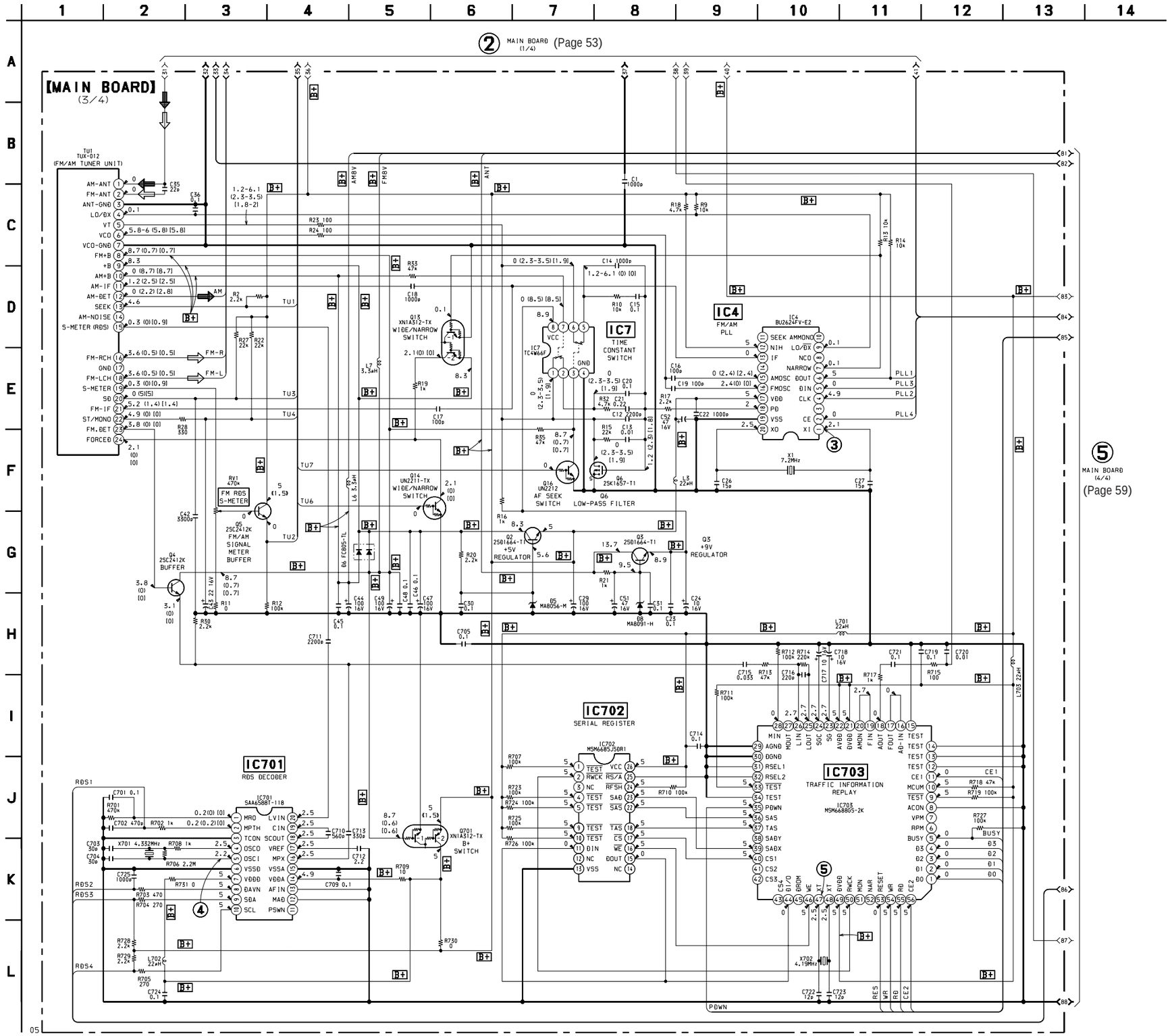
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW
  ⟨⟨ ⟩⟩ : MD PLAY

4-14. SCHEMATIC DIAGRAM – MAIN Section (2/4) – • See page 77 for IC Block Diagrams.



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM
( ) : MW
[ ] : LW
⟨⟨ ⟩⟩ : MD PLAY

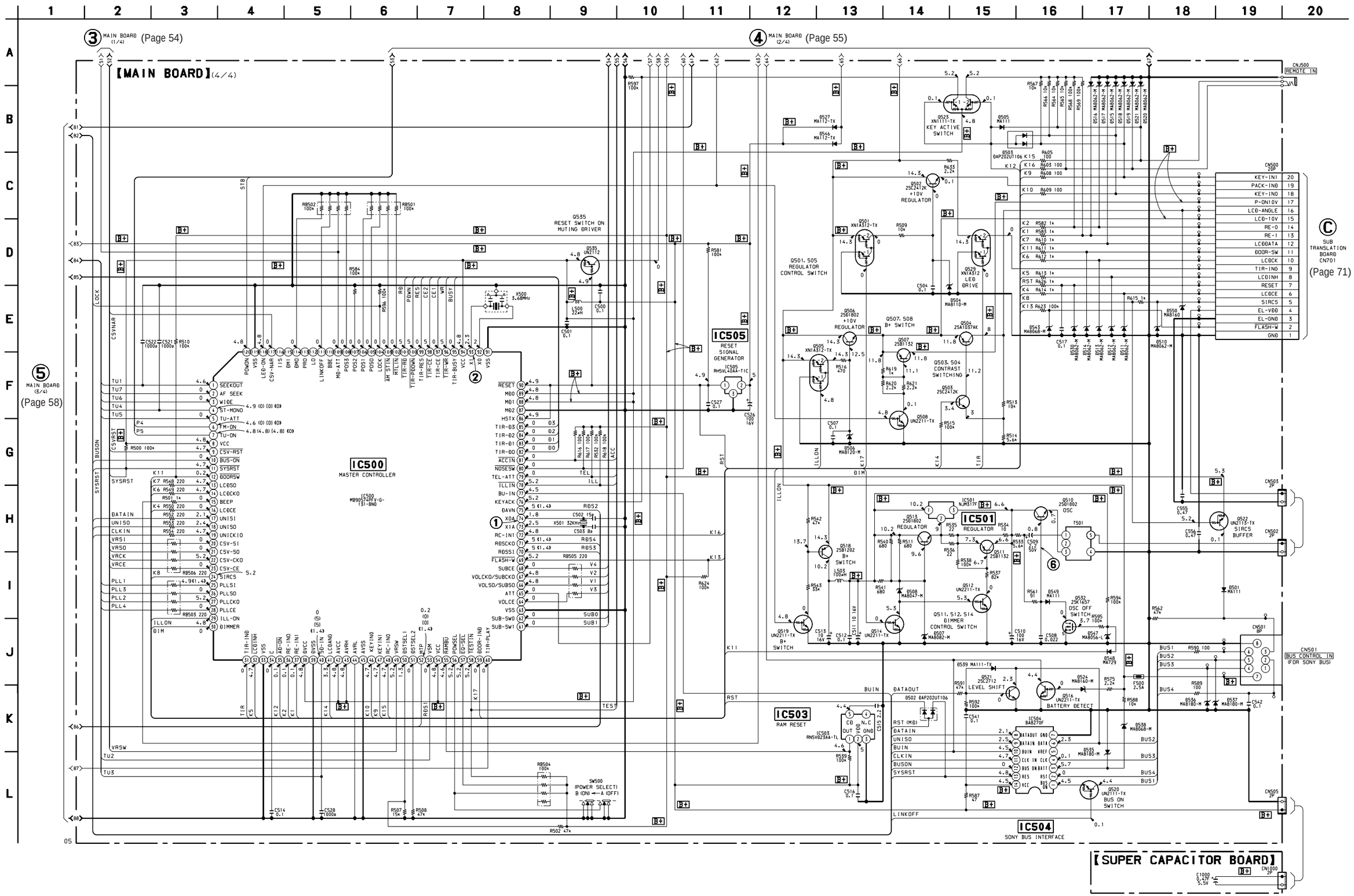
4-15. SCHEMATIC DIAGRAM – MAIN Section (3/4) – • See pages 77 for IC Block Diagrams. • See page 73 for Waveforms.



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW
  ⟨⟨ ⟩⟩ : MD PLAY

4-16. SCHEMATIC DIAGRAM – MAIN Section (4/4) –

• See page 77 for IC Block Diagrams. • See page 73 for Waveforms.



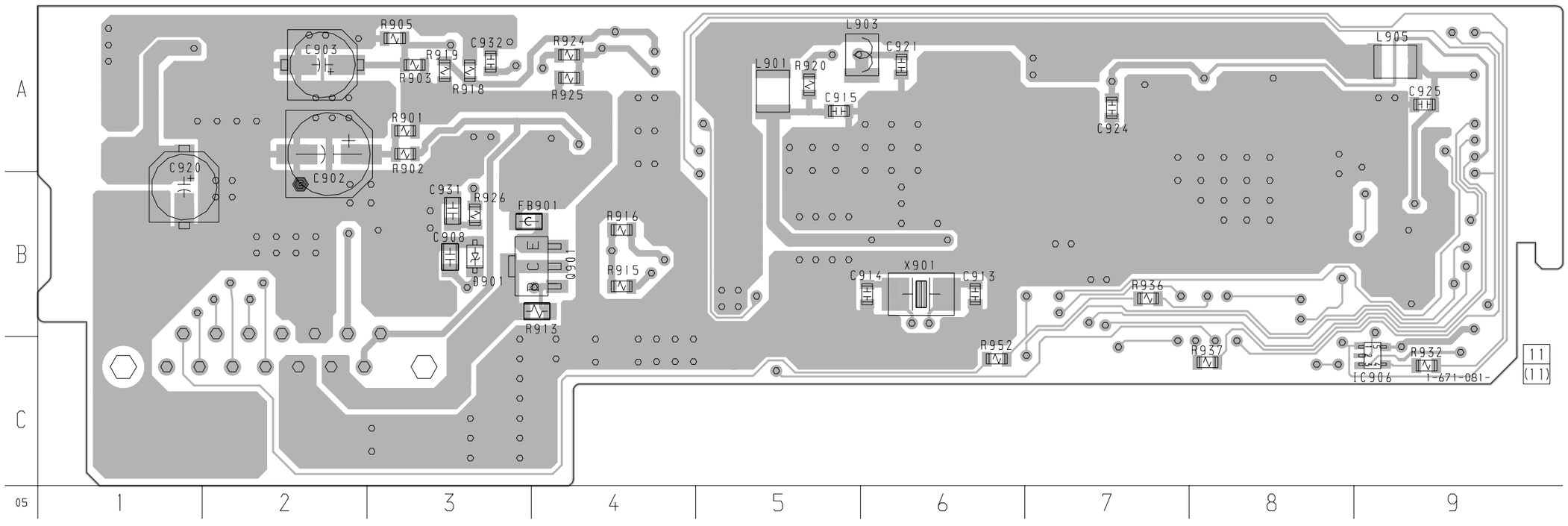
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW
  ⟨⟨ ⟩⟩ : MD PLAY

4-17. PRINTED WIRING BOARD – AUDIO Section – • See page 39 for Circuit Boards Location.

• **Semiconductor Location (Component Side)**

Ref. No.	Location
D901	B-3
IC906	C-9
Q901	B-4

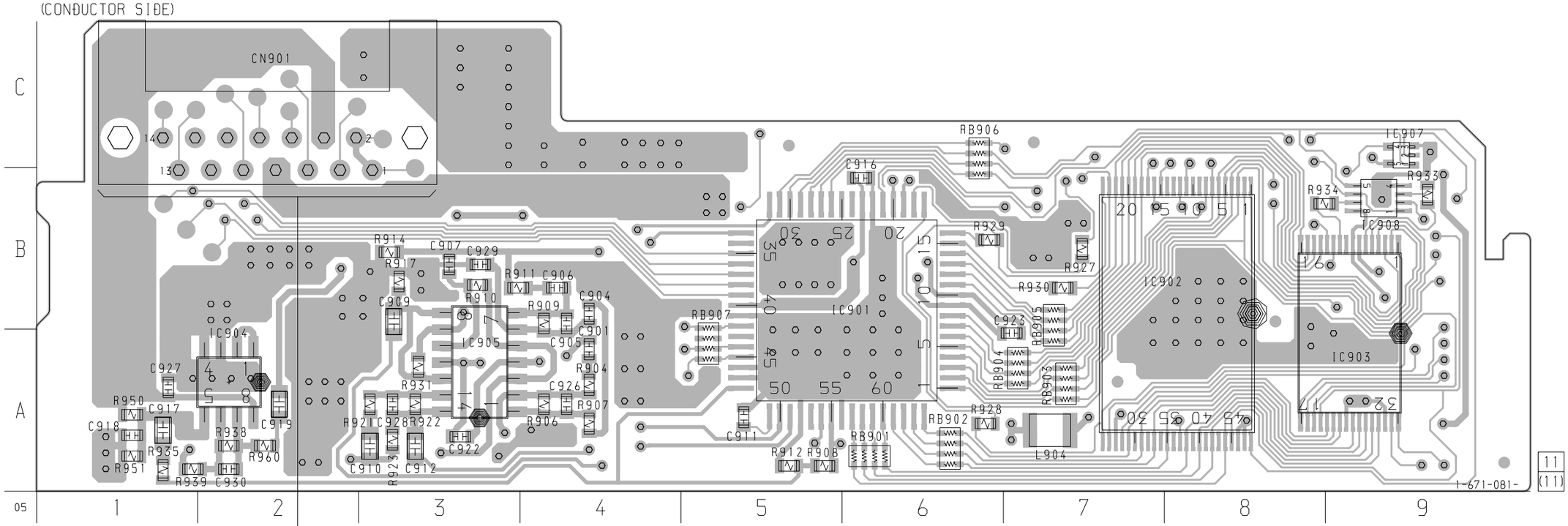
【AUDIO BOARD】
(COMPONENT SIDE)



• **Semiconductor Location (Conductor Side)**

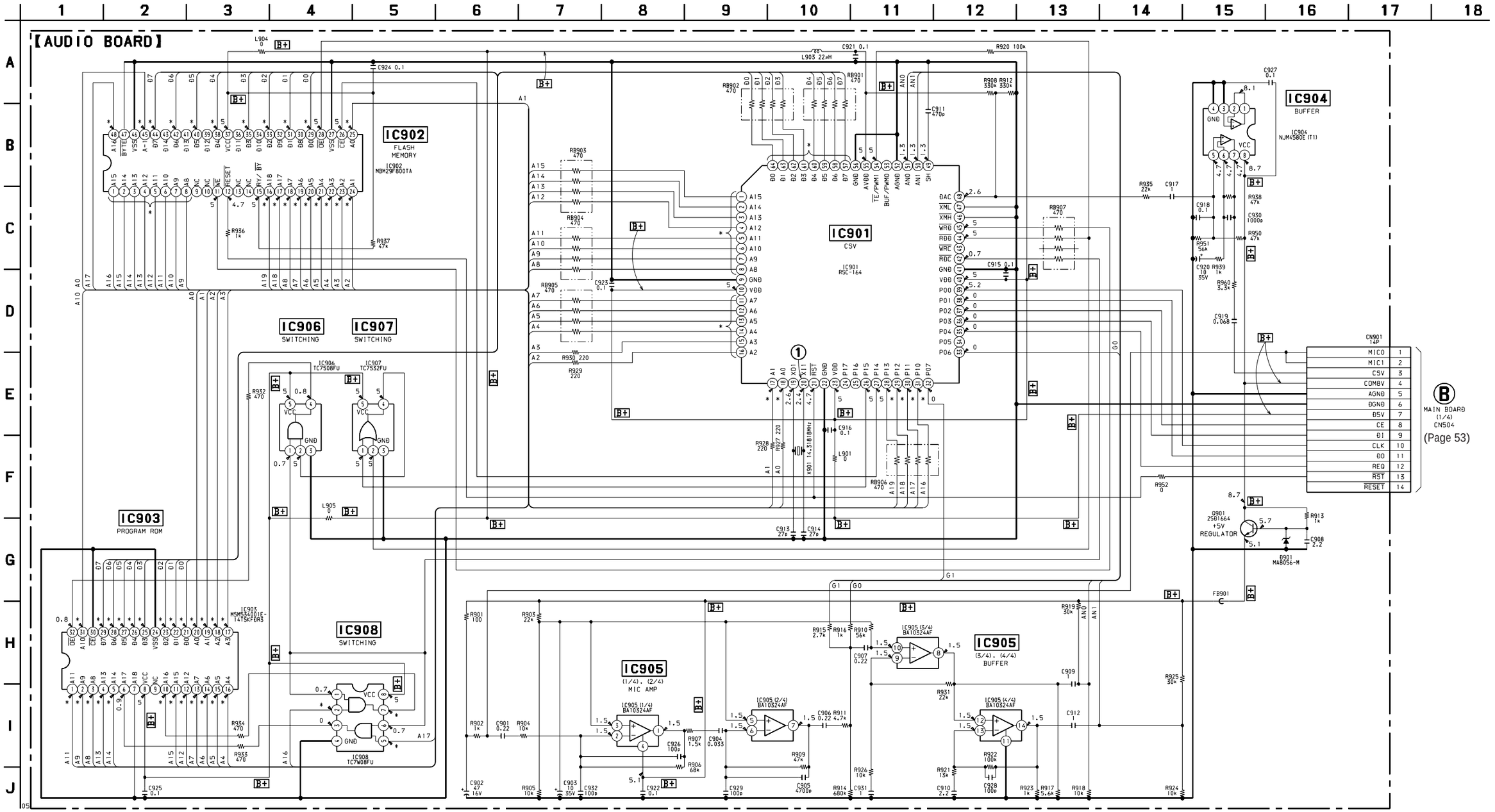
Ref. No.	Location
IC901	B-6
IC902	B-8
IC903	A-9
IC904	A-2
IC905	A-3
IC907	C-9
IC908	B-9

【AUDIO BOARD】
(CONDUCTOR SIDE)



4-18. SCHEMATIC DIAGRAM – AUDIO Section –

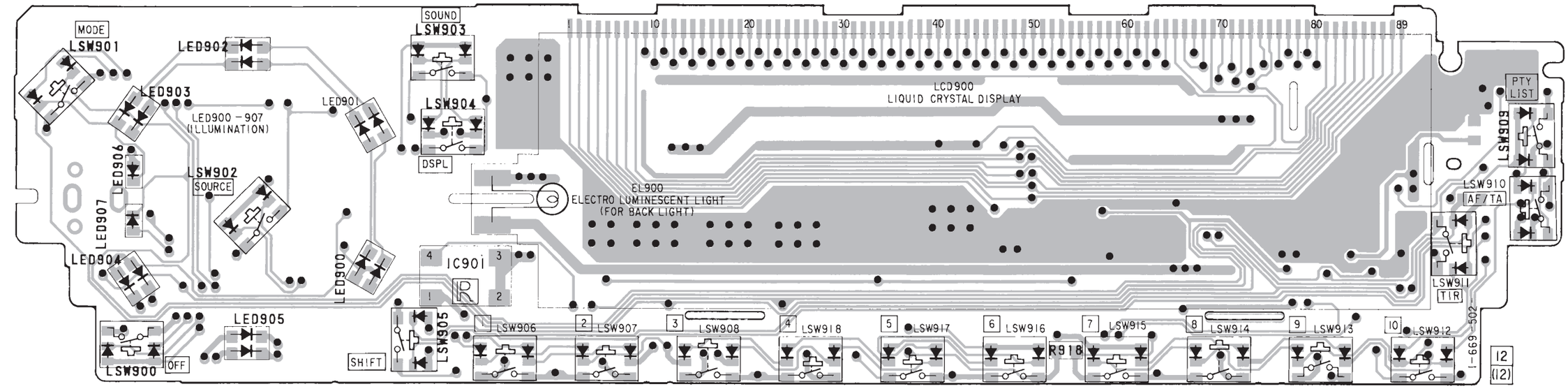
• See page 80 for IC Block Diagrams. • See page 73 for Waveform.



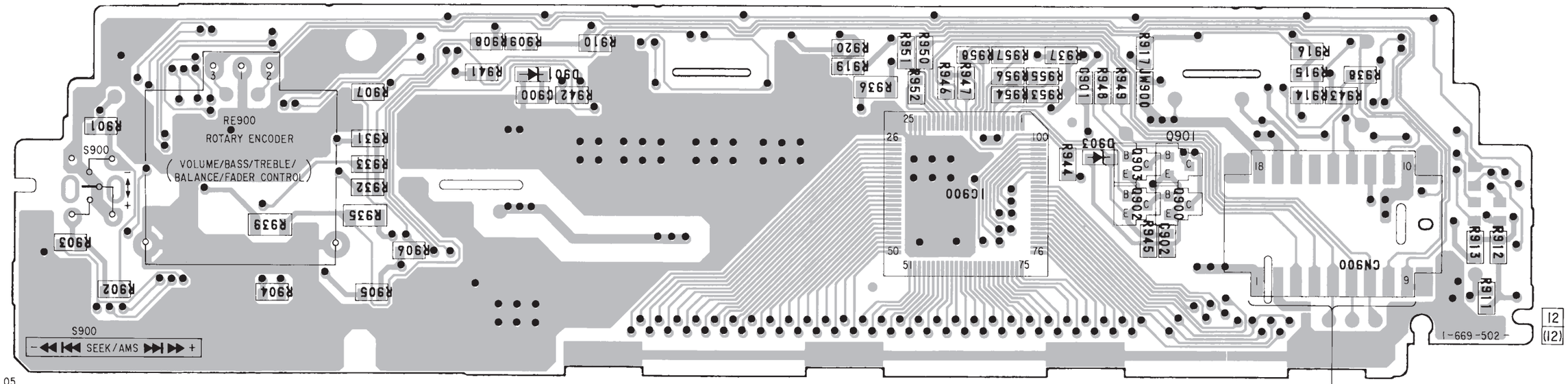
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

4-19. PRINTED WIRING BOARD – PANEL Section – • See page 39 for Circuit Boards Location.

【KEY BOARD】(COMPONENT SIDE)



【KEY BOARD】(CONDUCTOR SIDE)



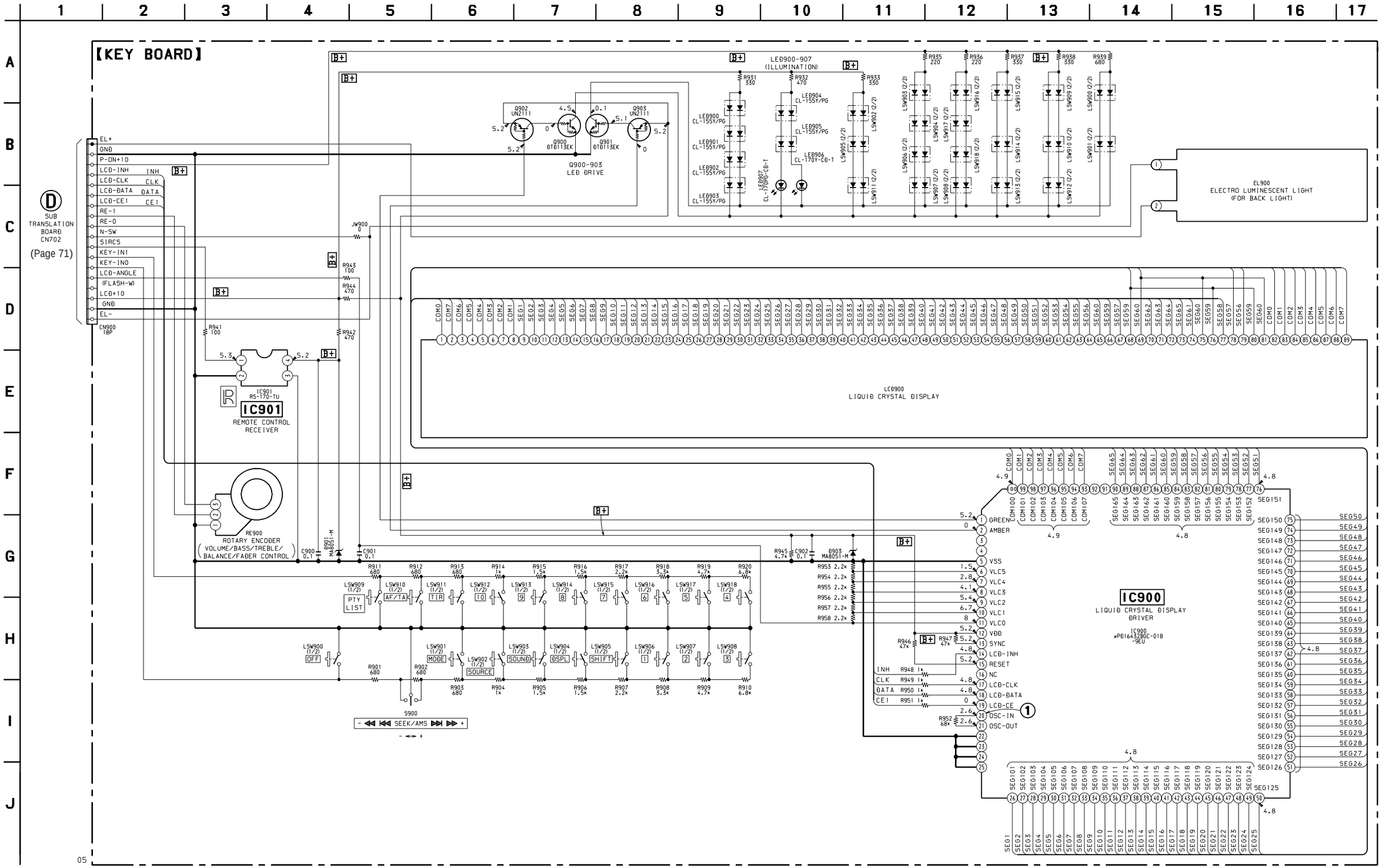
05

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D901	D-4	LED904	C-1
D903	E-8	LED905	C-2
		LED906	B-1
IC900	E-7	LED907	B-1
IC901	C-4		
		Q900	E-8
LED900	C-3	Q901	E-8
LED901	B-3	Q902	E-8
LED902	A-2	Q903	E-8
LED903	B-1		

D SUB TRANSLATION BOARD
CN702
(Page 70)

4-20. SCHEMATIC DIAGRAM – PANEL Section – • See page 73 for Waveform.

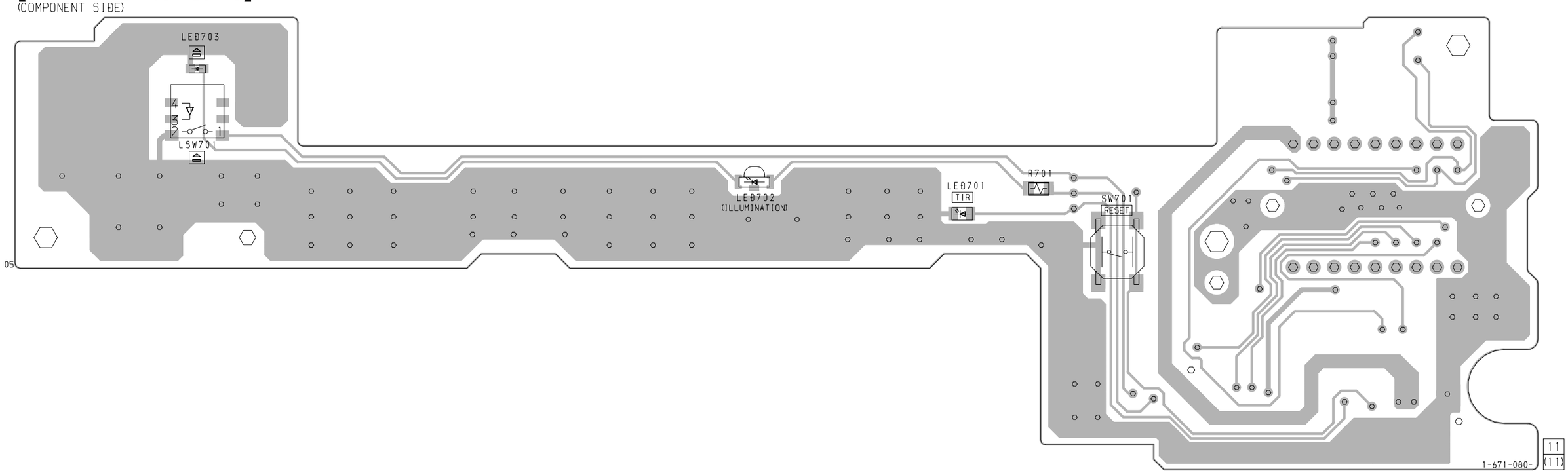


05

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

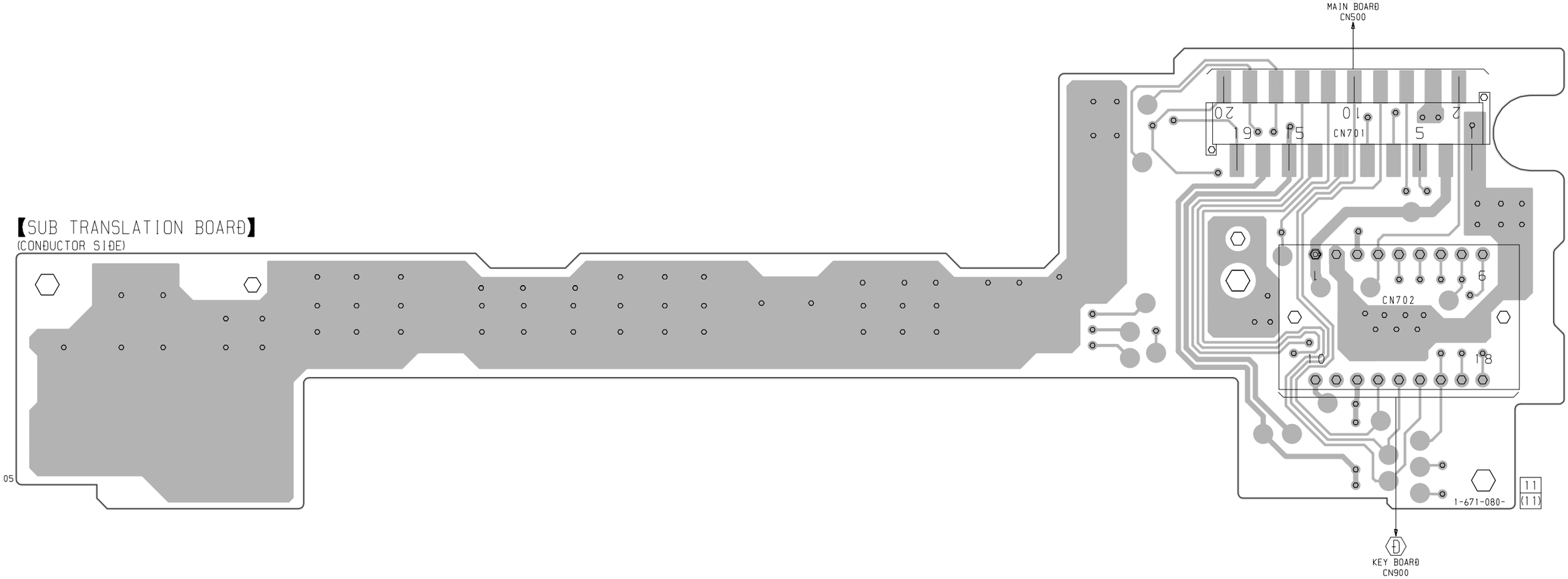
4-21. PRINTED WIRING BOARD – RELAY Section – • See page 39 for Circuit Boards Location.

【SUB TRANSLATION BOARD】
(COMPONENT SIDE)



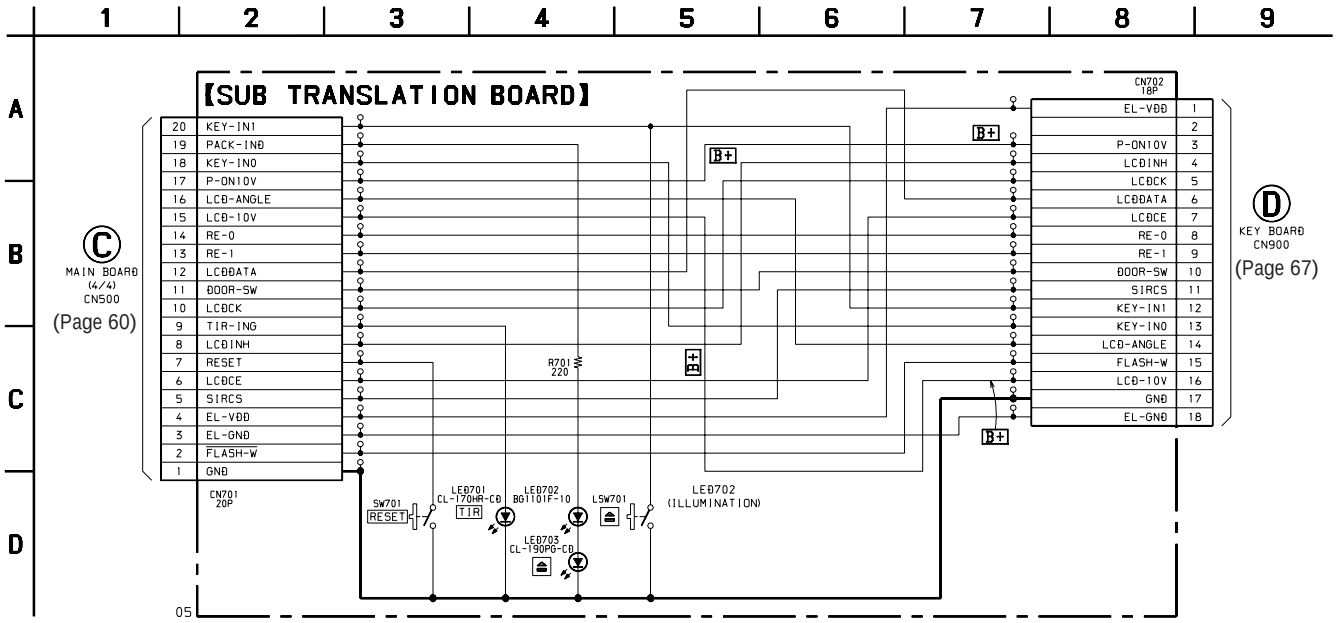
(Page 51)

【SUB TRANSLATION BOARD】
(CONDUCTOR SIDE)



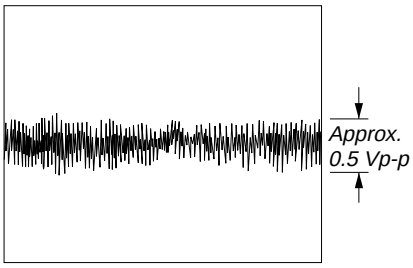
(Page 66)

4-22. SCHEMATIC DIAGRAM – RELAY Section –

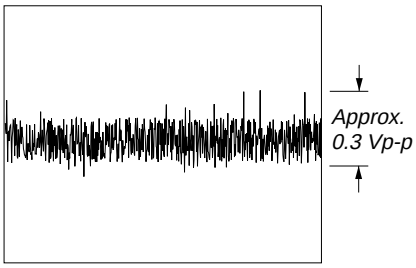


• Waveforms
– SERVO Board –

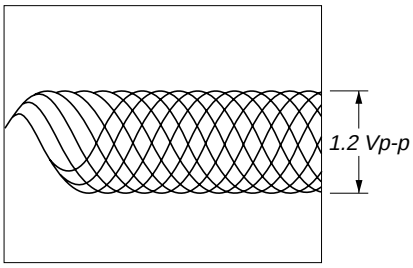
❶ IC302 ㉖ (TE) (PLAY MODE)



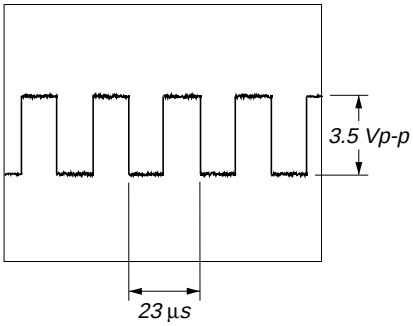
❷ IC302 ㉞ (FE) (PLAY MODE)



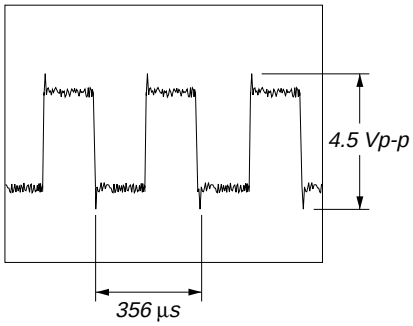
❸ IC302 ㊳ (RF) (PLAY MODE)



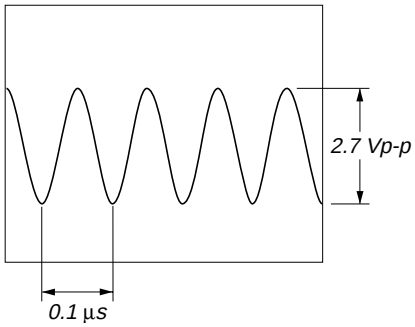
❹ IC301 ㉕ (LRCK) (PLAY MODE)



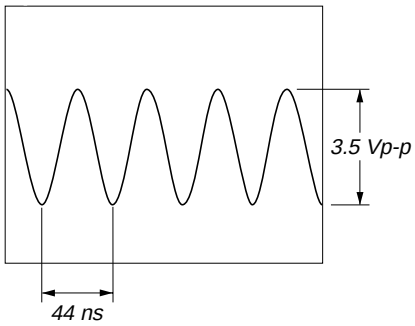
❺ IC301 ㉖ (XBCK) (PLAY MODE)



❻ IC501 ㉛ (EXTAL) (PLAY MODE)

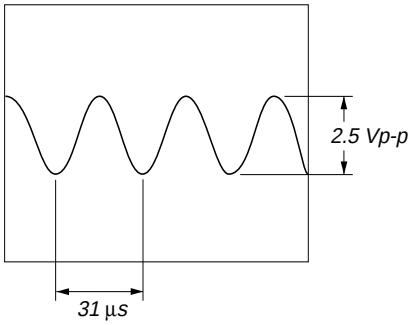


❼ IC304 ③ (IN) (PLAY MODE)

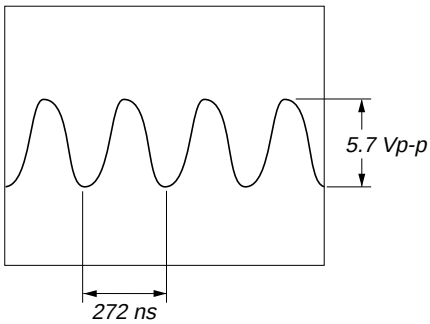


– MAIN Board –

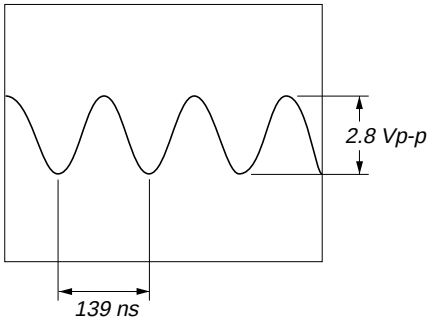
❶ IC500 ㉞ (X0A)



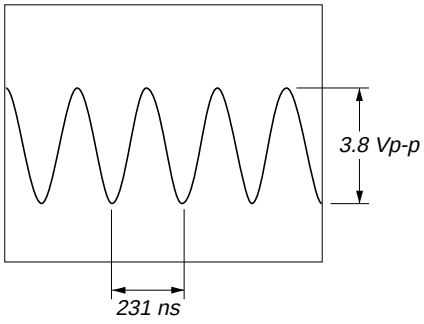
❷ IC500 ㊸ (X1)



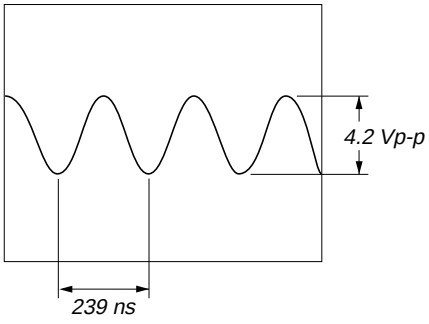
❸ IC4 ① (XI) (RADIO MODE)



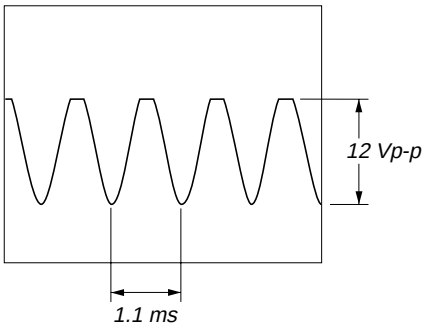
❹ IC701 ⑤ (OSCI)



❺ IC703 ㊼ (XT)

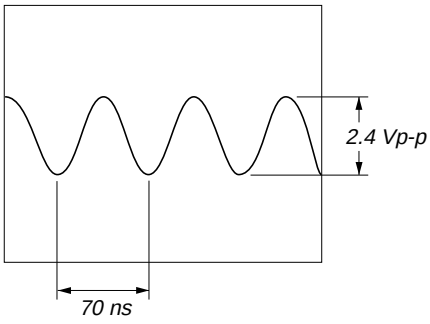


❻ Q510 (Base)



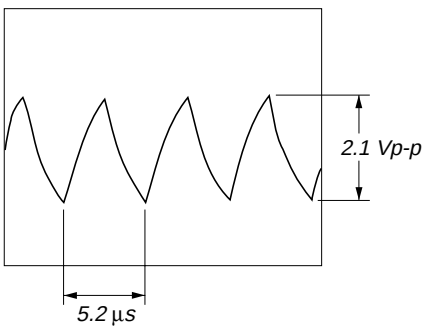
– AUDIO Board –

❶ IC901 ⑳ (XI1)



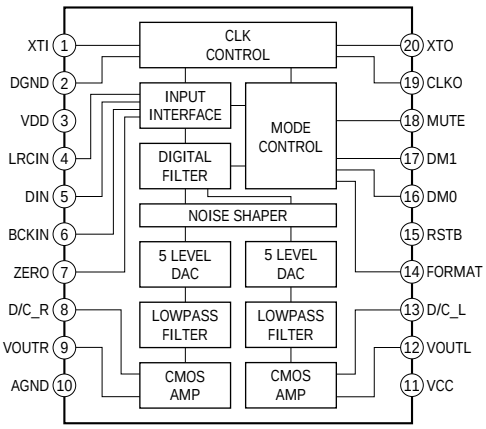
– KEY Board –

❶ IC900 ⑳ (OSC-IN)

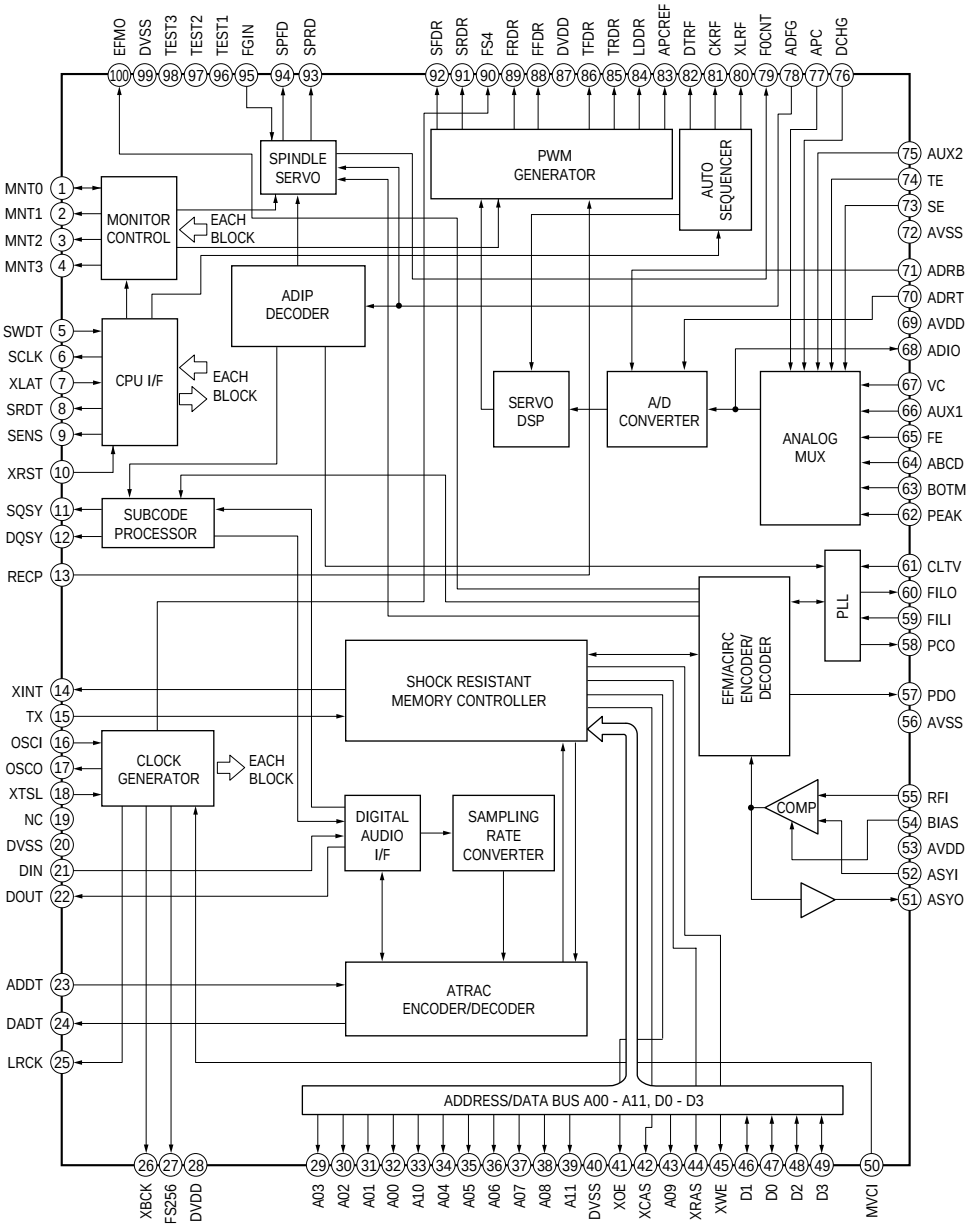


• IC Block Diagrams
– SERVO Board –

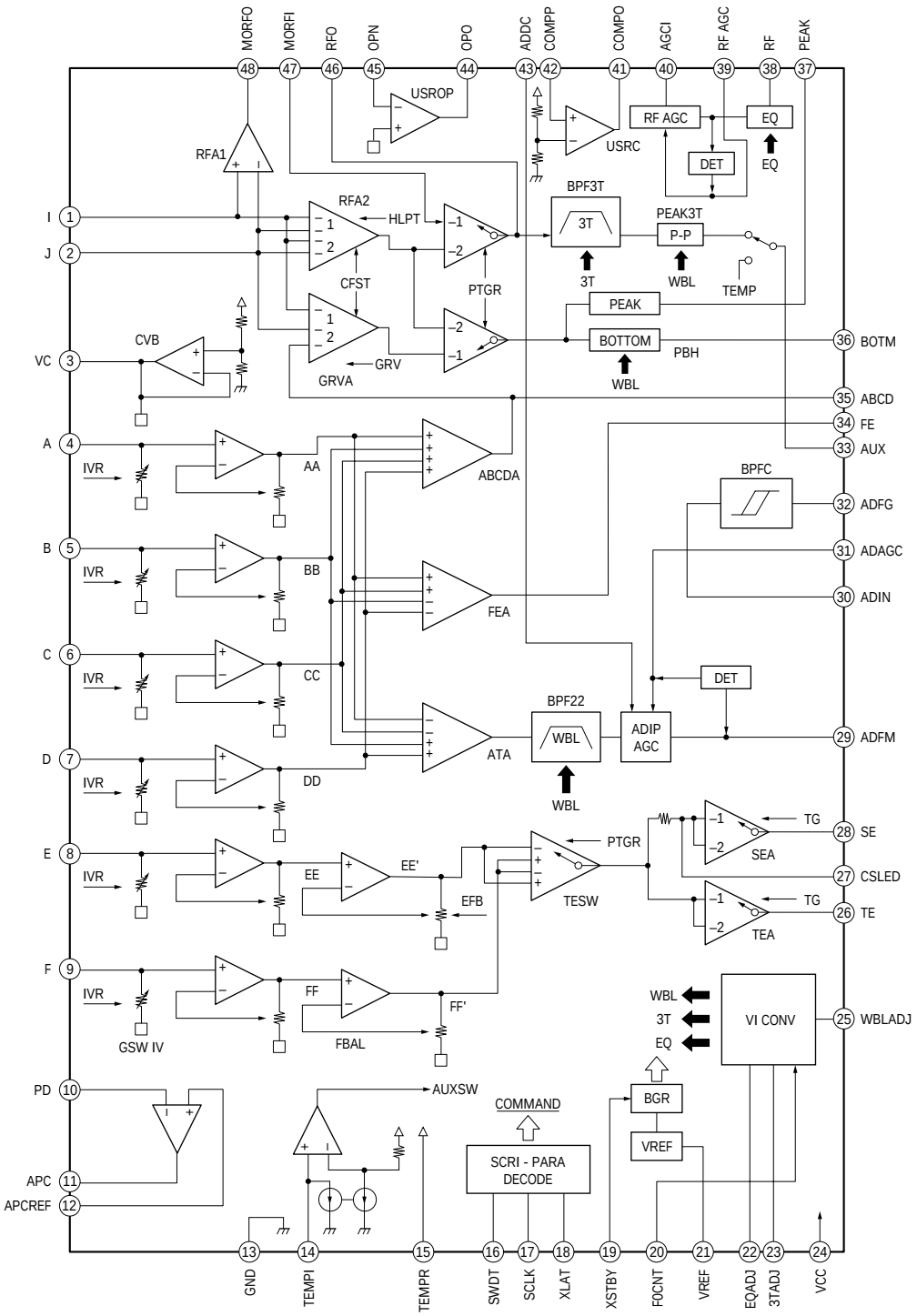
IC101 PCM1718E-T1



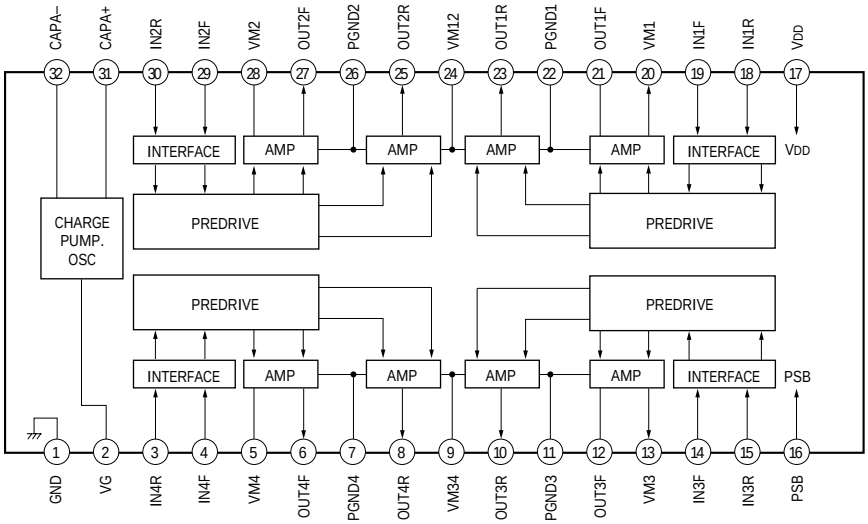
IC301 CXD2652AR



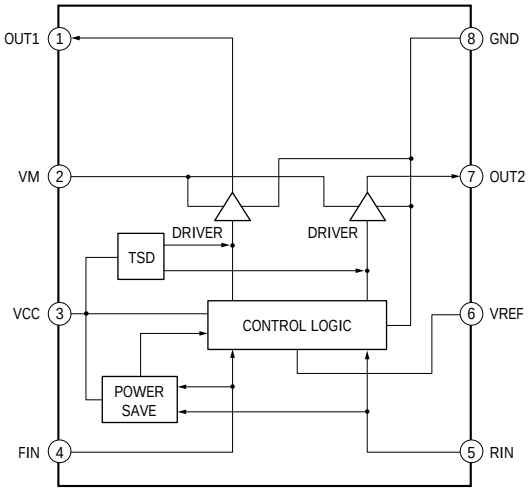
IC302 CXA2523R



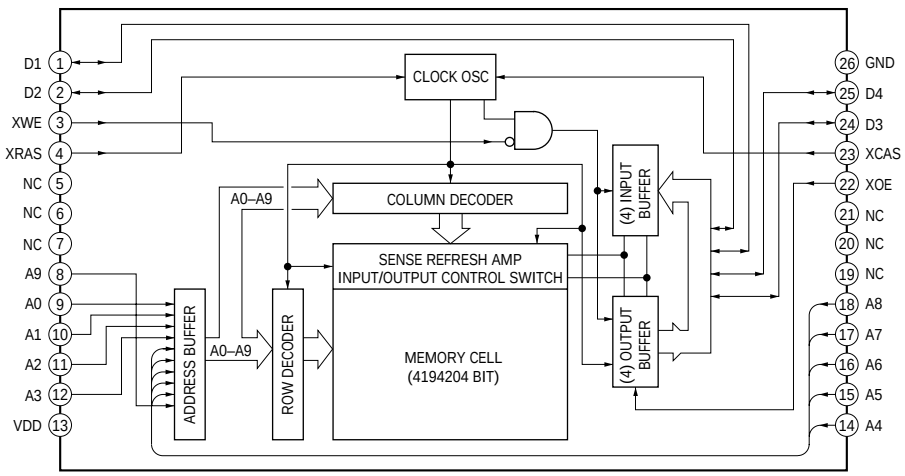
IC303 BH6511FS-E2



IC305 BA6287F

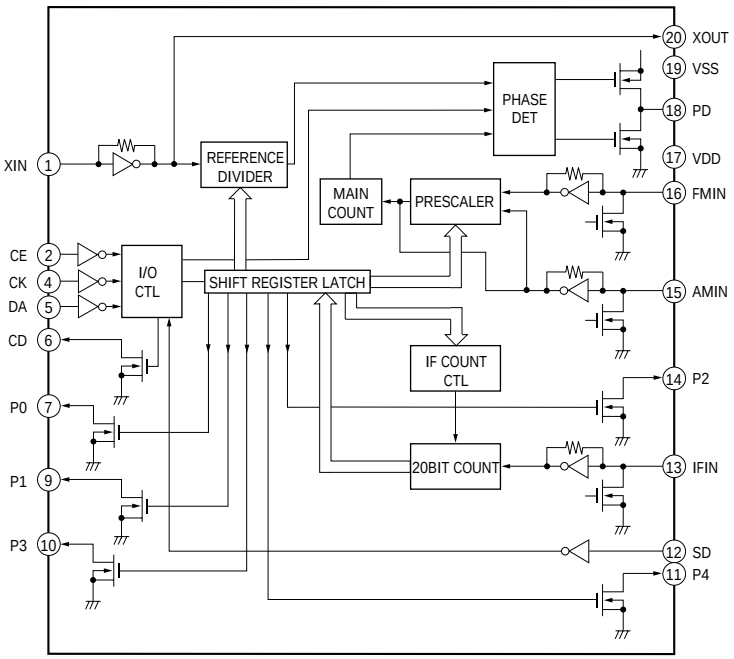


IC307 MSM51V4400-70TS-K

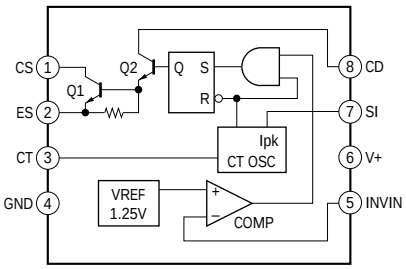


– MAIN Board –

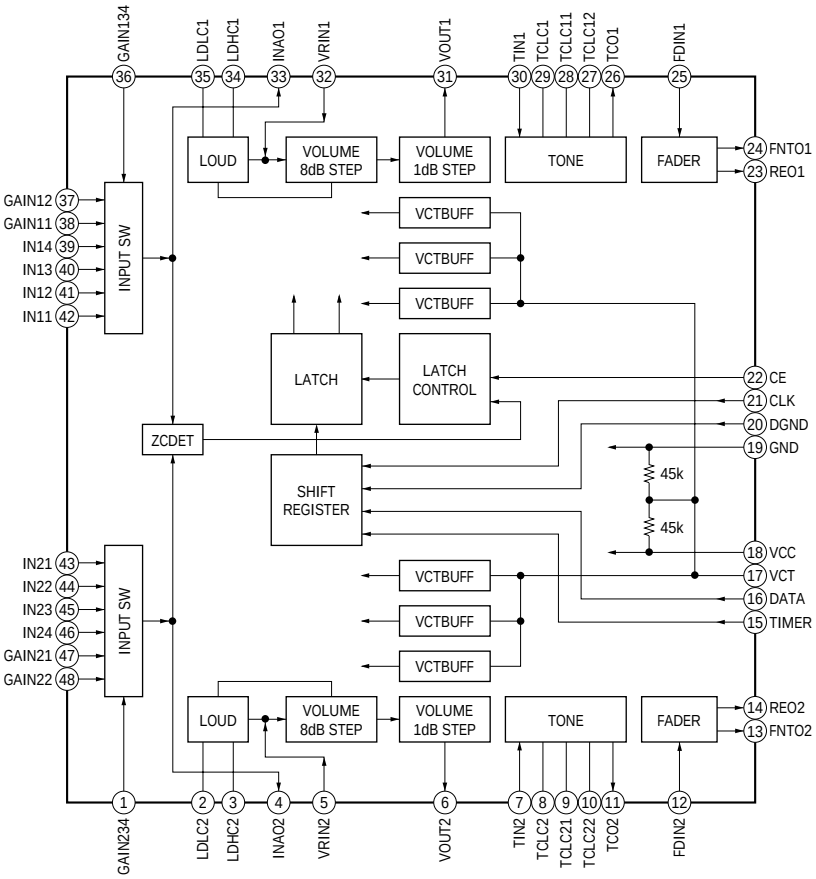
IC4 BU2624FV-E2



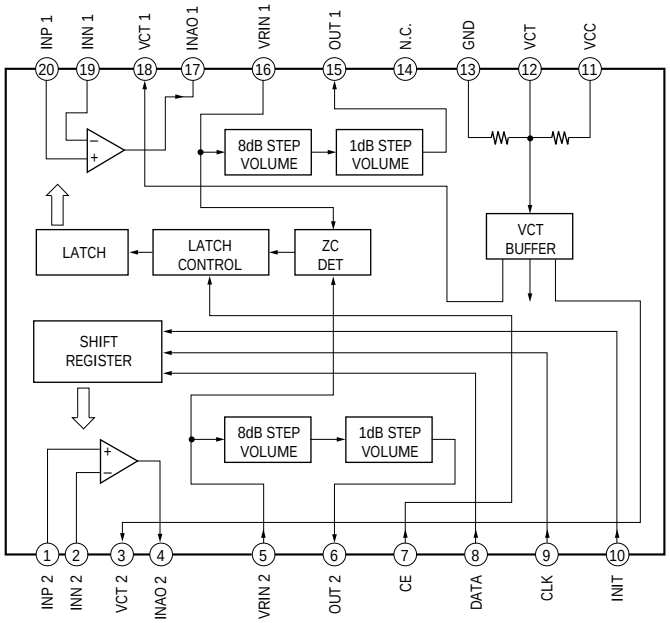
IC101 NJM2360AM (TE2)



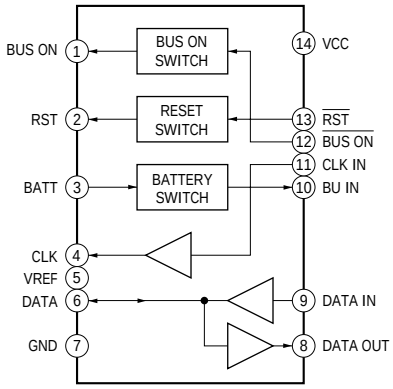
IC400 CXA1946BR



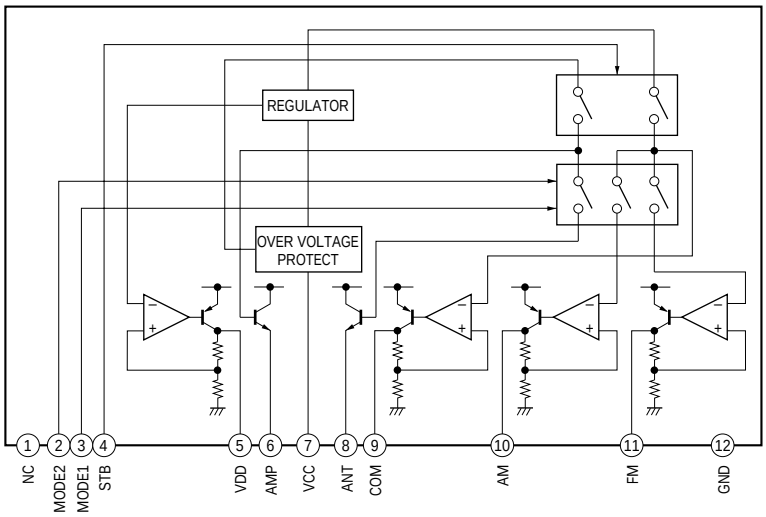
IC403 CXA1846AN-T4



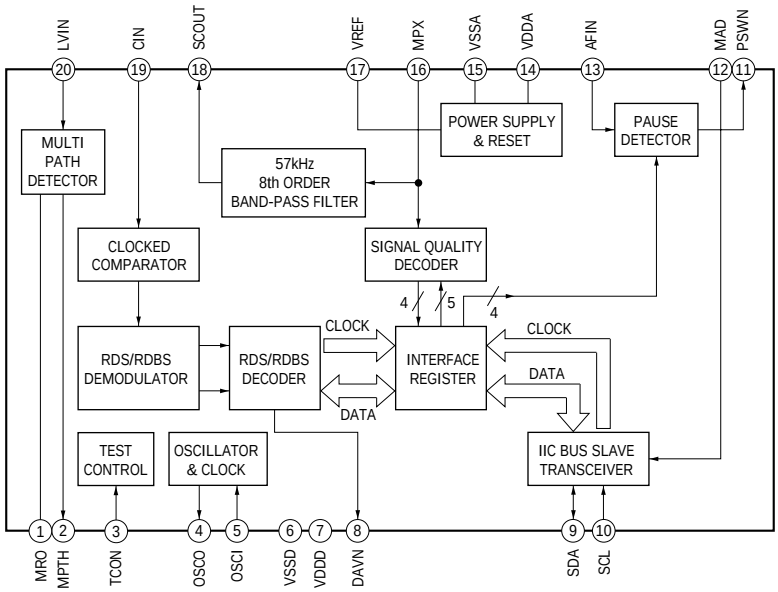
IC504 BA8270F-E2



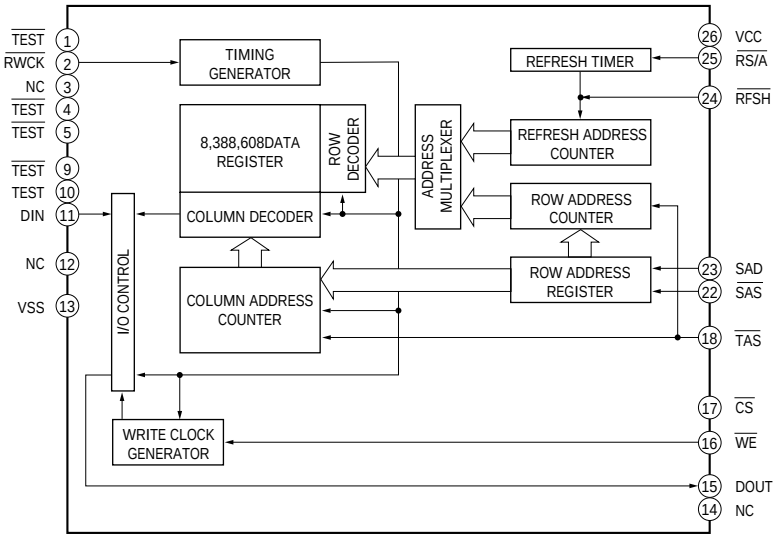
IC506 BA3918-V3



IC701 SAA6588T-118



IC702 MSM6585JSDR1



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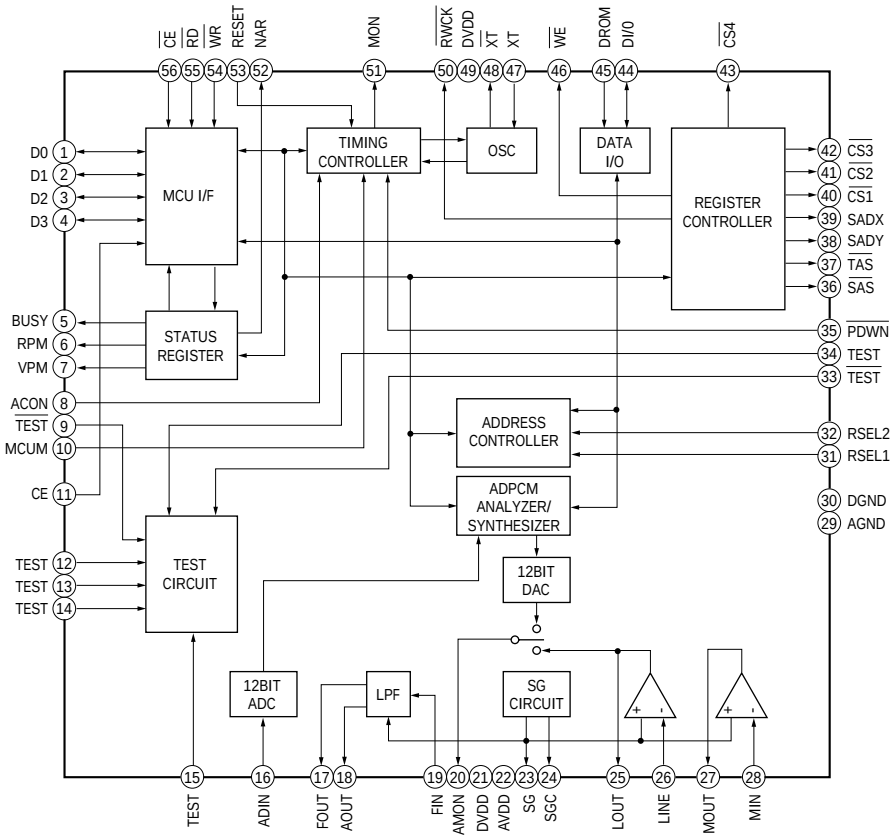
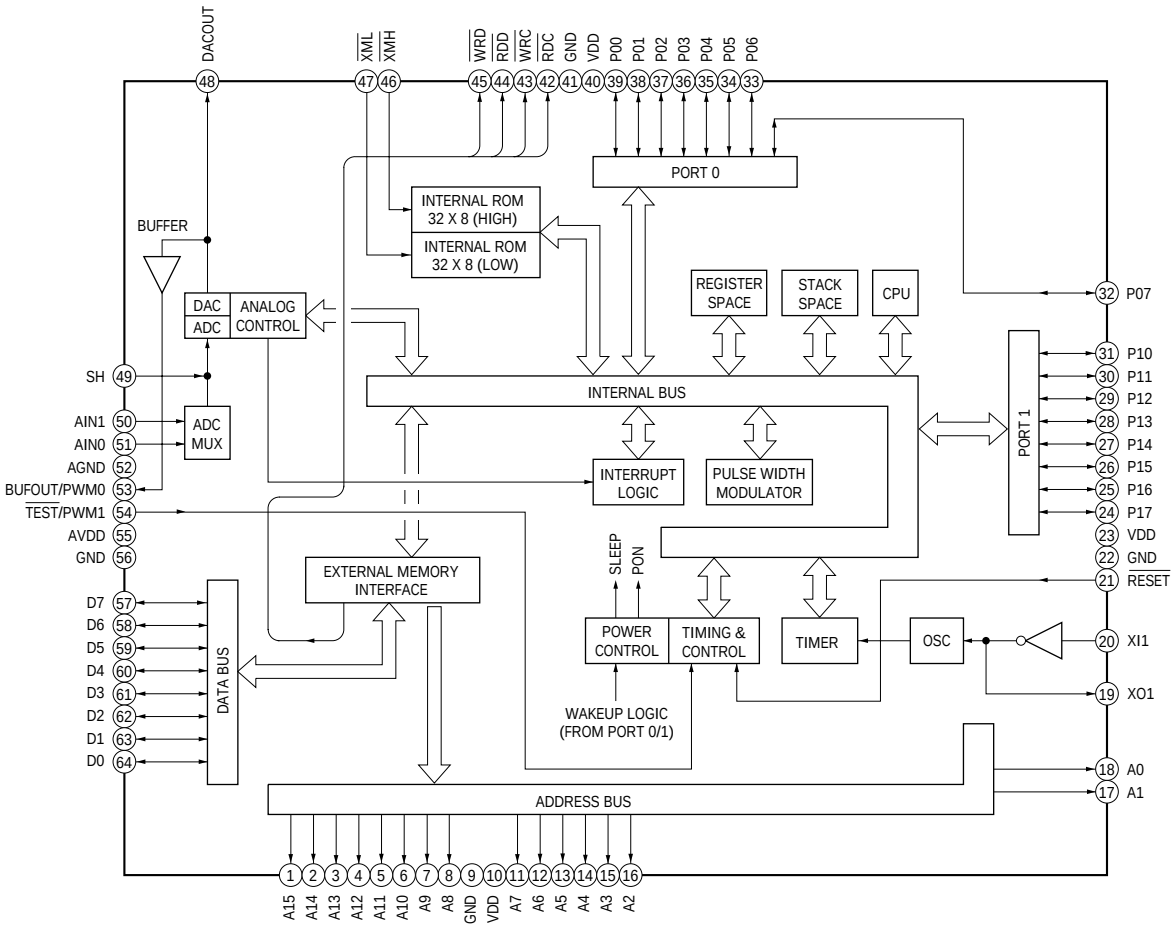
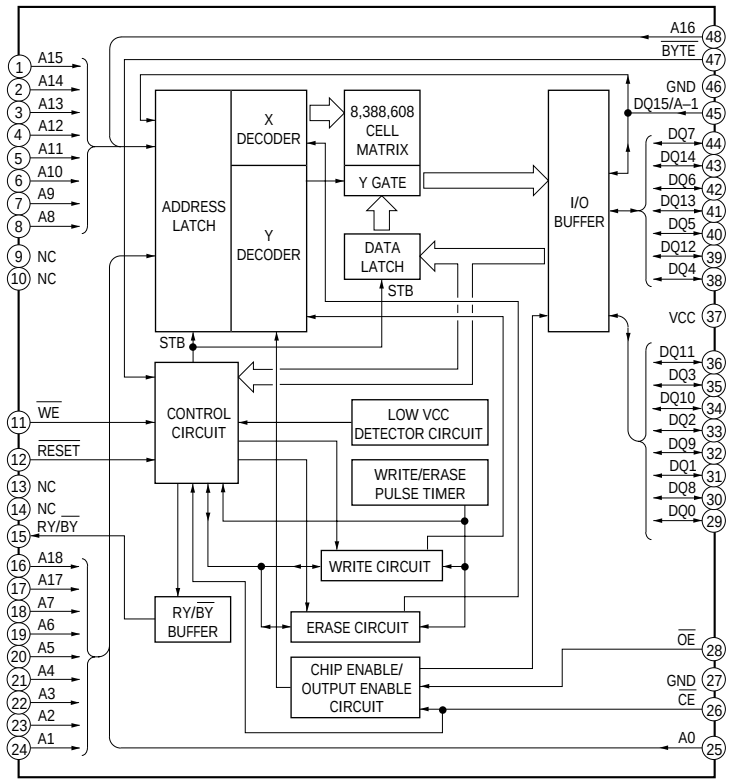


– AUDIO Board –

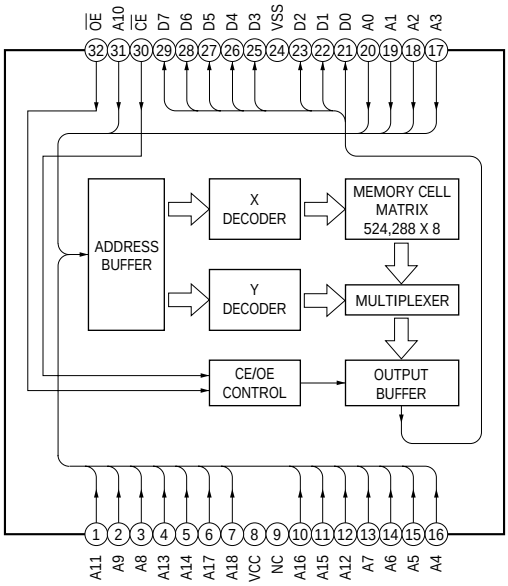
IC901 RSC-164



IC902 MBM29F800TA



IC903 MSM534001E-14TSKFDR3



4-23. IC PIN FUNCTION DESCRIPTION

- **SERVO BOARD IC301 CXD2652AR**
  (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM)

Pin No.	Pin Name	I/O	Function
1	MNT0	O	Focus OK signal output to the MD mechanism controller (IC501) "H" is output when focus is on ("L": NG)
2	MNT1	O	Track jump detection signal output to the MD mechanism controller (IC501)
3	MNT2	O	Monitor 2 signal output to the MD mechanism controller (IC501)
4	MNT3	O	Monitor 3 signal output to the MD mechanism controller (IC501)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC501)
6	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
7	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC501)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC501)
10	$\overline{\text{XRST}}$	I	Reset signal input from the MD mechanism controller (IC501) "L": reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC501) "L" is output every 13.3 msec Almost all, "H" is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output terminal "L" is output every 13.3 msec Almost all, "H" is output Not used (open)
13	RECP	I	Laser power selection signal input terminal "H": recording mode, "L": playback mode (fixed at "L" in this set)
14	XINT	O	Interrupt status output to the MD mechanism controller (IC501)
15	TX	I	Recording data output enable signal input terminal Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at "L")
16	OSCI	I	System clock signal (512Fs=22.5792 MHz) input from the oscillator circuit
17	OSCO	O	System clock signal (512Fs=22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting "L": 45.1584 MHz, "H": 22.5792 MHz (fixed at "H" in this set)
19	RVDD	—	Power supply terminal (+3.3V) (digital system)
20	RVSS	—	Ground terminal (digital system)
21	DIN	I	Digital audio signal input terminal when recording mode (for optical in) Not used (fixed at "L")
22	DOUT	O	Digital audio signal output terminal when playback mode (for optical out) Not used (open)
23	ADDT	I	Recording data input terminal Not used (fixed at "L")
24	DADT	O	Playback data output to the D/A converter (IC101)
25	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the D/A converter (IC101)
26	XBCK	O	Bit clock signal (2.8224 MHz) output to the D/A converter (IC101)
27	FS256	O	Clock signal (11.2896 MHz) output to the D/A converter (IC101)
28	DVDD	—	Power supply terminal (+3.3V) (digital system)
29	A03	O	Address signal output to the D-RAM (IC307)
30	A02	O	
31	A01	O	
32	A00	O	
33	A10	O	Address signal output to the external D-RAM Not used (open)
34	A04	O	Address signal output to the D-RAM (IC307)
35	A05	O	
36	A06	O	
37	A07	O	
38	A08	O	
39	A11	O	Address signal output to the external D-RAM Not used (open)

Pin No.	Pin Name	I/O	Function
40	DVSS	—	Ground terminal (digital system)
41	$\overline{\text{XOE}}$	O	Output enable signal output to the D-RAM (IC307) "L" active
42	$\overline{\text{XCAS}}$	O	Column address strobe signal output to the D-RAM (IC307) "L" active
43	A09	O	Address signal output to the D-RAM (IC307)
44	$\overline{\text{XRAS}}$	O	Row address strobe signal output to the D-RAM (IC307) "L" active
45	$\overline{\text{XWE}}$	O	Write enable signal output to the D-RAM (IC307) "L" active
46	D1	I/O	Two-way data bus with the D-RAM (IC307)
47	D0	I/O	
48	D2	I/O	
49	D3	I/O	
50	MVCI	I	Digital in PLL oscillation input from the external VCO Not used (fixed at "L")
51	ASYO	O	Playback EFM full-swing output terminal
52	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
53	AVDD	—	Power supply terminal (+3.3V) (analog system)
54	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
55	RFI	I (A)	Playback EFM RF signal input from the CXA2523R (IC302)
56	AVSS	—	Ground terminal (analog system)
57	PDO	O (3)	Phase comparison output for clock playback analog PLL of the playback EFM Not used (open)
58	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
59	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
60	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
61	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
62	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523R (IC302)
63	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523R (IC302)
64	ABCD	I (A)	Light amount signal (ABCD) input from the CXA2523R (IC302)
65	FE	I (A)	Focus error signal input from the CXA2523R (IC302)
66	AUX1	I (A)	Auxiliary signal (I_3 signal/temperature signal) input terminal Not used (fixed at "H")
67	VC	I (A)	Middle point voltage (+1.65V) input from the CXA2523R (IC302)
68	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
69	AVDD	—	Power supply terminal (+3.3V) (analog system)
70	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at "H" in this set)
71	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at "L" in this set)
72	AVSS	—	Ground terminal (analog system)
73	SE	I (A)	Sled error signal input from the CXA2523R (IC302)
74	TE	I (A)	Tracking error signal input from the CXA2523R (IC302)
75	AUX2	I (A)	Auxiliary signal input terminal Light amount signal input from the CXA2523R (IC302)
76	DCHG	I (A)	Connected to the +3.3V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at "L")
78	ADFG	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input from the CXA2523R (IC302)
79	F0CNT	O	Filter f0 control signal output terminal Not used (open)
80	XLRF	O	Serial data latch pulse signal output terminal Not used (open)
81	CKRF	O	Serial data transfer clock signal output terminal Not used (open)
82	DTRF	O	Writing serial data output terminal Not used (open)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (–) output to the BH6511FS (IC303)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6511FS (IC303)

Pin No.	Pin Name	I/O	Function
87	DVDD	—	Power supply terminal (+3.3V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6511FS (IC303)
89	FRDR	O	Focus servo drive PWM signal (–) output to the BH6511FS (IC303)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X'tal system) Not used (open)
91	SRDR	O	Sled servo drive PWM signal (–) output to the BH6511FS (IC303)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6511FS (IC303)
93	SPRD	O	Spindle servo drive PWM signal (–) output to the BH6511FS (IC303)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6511FS (IC303)
95	FGIN	I	Not used (fixed at "L")
96	TEST1	I	Input terminal for the test (fixed at "L")
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open)

* I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• **SERVO BOARD IC302 CXA2523R (RF AMP, FOCUS/TRACKING ERROR AMP)**

Pin No.	Pin Name	I/O	Function
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used (open)
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used (open)
16	SWDT	I	Writing serial data input from the MD mechanism controller (IC501)
17	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
18	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
19	$\overline{\text{XSTBY}}$	I	Standby signal input terminal "L": standby (fixed at "H" in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2652AR (IC301)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2652AR (IC301)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz ± 1 kHz) output to the CXD2652AR (IC301)
33	AUX	O	Auxiliary signal (I_3 signal/temperature signal) output terminal Not used (open)
34	FE	O	Focus error signal output to the CXD2652AR (IC301)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2652AR (IC301)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD2652AR (IC301)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2652AR (IC301)
38	RF	O	Playback EFM RF signal output to the CXD2652AR (IC301)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at "L")
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at "L")
46	RFO	O	RF signal output terminal
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output terminal

• **MAIN BOARD IC500 MB90574PFV-G-131-BND (MASTER CONTROLLER)**

Pin No.	Pin Name	I/O	Function
1	$\overline{\text{SEEKOUT}}$	O	Seek control signal output to the FM/AM tuner unit (TU1) AM mode: Used for IF count output/SD output request/AGC cut at SEEK or BTM FM mode: Used for SD speed up at SEEK, BTM, or AF "L" is output at tuner off
2	AF SEEK	O	PLL low-pass filter time constant selection signal output at AF SEEK "H" is output when AF SEEK
3	WIDE	O	IF band select signal output to the FM/AM tuner unit (TU1) "H": wide mode In receiving FM signals, interference noise from adjacent stations is removed by narrowing the IF band automatically in the tuner unit so as to raise the selectivity, but in this case, the distortion may increase and accordingly, the IF band is widened forcibly
4	ST-MONO	I/O	FM stereo broadcasting detection signal input from the FM/AM tuner unit (TU1), or forced monaural control signal output to the FM/AM tuner unit (TU1) "L" is input in the FM stereo mode, or "L" is output in the forced monaural mode
5	TU-ATT	O	Muting on/off control signal output of the FM and AM tuner signal "H": muting on
6	FM-ON	O	FM system power supply on/off control signal output to the BA3918 (IC506) "H": FM power on, "L": AM power on
7	TU-ON	O	Tuner system power supply on/off control signal output to the BA3918 (IC506) "H": tuner power on
8	VCC	—	Power supply terminal (+5V)
9	$\overline{\text{CSV-RST}}$	O	Reset signal output to the RSC-164 (IC901) and flash memory (IC902) "L": reset
10	$\overline{\text{BUS-ON}}$	O	Bus on/off control signal output to the MD mechanism controller (IC501) and SONY bus interface (IC504) "L": bus on
11	$\overline{\text{SYSRST}}$	O	Reset signal output to the MD mechanism controller (IC501) and SONY bus interface (IC504) "L": reset
12	$\overline{\text{DOORSW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
13	LCD SO	O	Serial data output to the liquid crystal display driver (IC900)
14	LCD CKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC900)
15	BEEP	O	Beep sound drive signal output terminal
16	LCD CE	O	Chip enable signal output to the liquid crystal display driver (IC900) "H" active
17	UNISI	I	Serial data input from the SONY bus interface (IC504)
18	UNISO	O	Serial data output to the SONY bus interface (IC504)
19	UNICKIO	I/O	Serial data transfer clock signal in/out terminal with the MD mechanism controller (IC501) and SONY bus interface (IC504)
20	CSV-SI	I	Serial data input from the RSC-164 (IC901)
21	CSV-SO	O	Serial data output to the RSC-164 (IC901)
22	CSV-CKO	O	Serial data transfer clock signal output to the RSC-164 (IC901)
23	CSV-CE	O	Chip enable signal output to the RSC-164 (IC901) "H" active
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC901)
25	PLLSI	I	PLL serial data input from the FM/AM PLL (IC4)
26	PLLSO	O	PLL serial data output to the FM/AM PLL (IC4)
27	PLLCKO	O	PLL serial data transfer clock signal output to the FM/AM PLL (IC4)
28	PLLCE	O	PLL chip enable signal output to the FM/AM PLL (IC4) "H" active
29	ILL-ON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC900) "H": power on Depends on initial setting of power select switch (SW500) Power select switch (SW500) on: "H" output at the accessory on Power select switch (SW500) off: "H" output at the power on
30	DIMMER	I/O	Dimmer control in/out terminal At initial mode: The presence of dimmer select function is set (if this status, if "L" is input, the dimmer select function is present) At normal mode: LCD back light brightness control signal output

Pin No.	Pin Name	I/O	Function
31	TIR-IND	O	LED drive signal output of the TIR indicator (LED701) "H": LED on
32	$\overline{\text{LCDINH}}$	O	Blank indicate control signal output to the liquid crystal display driver (IC900) "L": no display
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	$\overline{\text{AD-ON}}$	O	A/D converter power control signal output When the KEYACK (pin ⑯) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
36	RE-IN0	I	Dial pulse input of the rotary encoder (RE900) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
37	RE-IN1	I	
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40	SD-IN	I	Station detector detect input from the FM/AM tuner unit (TU1) Stop level for SEEK, BTM, etc. is determined SD is present at input of "H"
41	LCDANG	O	View field angle control signal is output when front panel is fully opened "H": front panel is fully opened
42	AVCC	—	Power supply terminal (+5V) (for A/D converter)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for A/D converter)
46	KEYIN0	I	Key input terminal (A/D input) (LSW900, S900, LSW901 to LSW908) OFF, SEEK/AMS ◀◀ ⏮ – + ⏭ ▶▶, MODE, SOURCE, SOUND, DSPL, SHIFT, 1, 2, 3 keys input
47	KEYIN1	I	Key input terminal (A/D input) (LSW701, LSW909 to LSW918) ⏏, LIST, AF/TA, TIR, 10, 9, 8, 7, 6, 5, 4 keys input
48	RC-IN0	I	Rotary remote commander key input terminal (A/D input)
49	VRSW	O	Power on/off control signal output for the RSC-164 (IC901), flash memory (IC902) and program ROM (IC903) power supply "H": power on
50	DSTSEL1	I	Destination setting terminal (fixed at 1/4 voltage)
51	DSTSEL2	I	Destination setting terminal (fixed at "L")
52	MTP	I	Multi-path input from the RDS decoder (IC701)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	$\overline{\text{RAMBU}}$	I	Internal RAM reset detection signal input from the RN5VD33AA (IC503) Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset
56	POWSEL	I	Power select switch (SW500) input terminal "L": on (operation mode), "H": off (halt mode)
57	$\overline{\text{EQ-SEL}}$	I	Not used (fixed at "H")
58	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
59	DOOR-IND	O	LED drive signal output of the illumination LED (LED702, 703) "H": LED on "H" is output to turn on LED when front panel is opened
60	TIR-PLAY	O	AM/TIR selection signal output to the IC704 "L": AM signal, "H": TIR signal
61	SUB-SW1	O	Sub woofer output cut-off frequency select signal output terminal
62	SUB-SW0	O	Sub woofer output cut-off frequency select signal output terminal
63	VSS	—	Ground terminal
64	VOLCE	O	Chip enable signal output to the main electrical volume (IC400) "H": active
65	ATT	O	Audio line muting on/off control signal output terminal "H": muting on
66	VOLSO/ SUBSO	O	Serial data output to the main electrical volume (IC400) and sub electrical volume (IC403)
67	VOLCKO/ SUBCKO	O	Serial data transfer clock signal output to the main electrical volume (IC400) and sub electrical volume (IC403)

Pin No.	Pin Name	I/O	Function
68	SUBCE	O	Chip enable signal output to the sub electrical volume (IC403) "H" active
69	$\overline{\text{FLASH-W}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used (fixed at "H" in this set)
70	RDSSI	I	Serial data input from the RDS decoder (IC701)
71	RDSCKO	O	Serial data reading clock signal output to the RDS decoder (IC701)
72	RC-IN1	I	Rotary remote commander shift key input terminal "L": shift
73	X1A	O	Sub system clock output terminal (32 kHz)
74	X0A	I	Sub system clock input terminal (32 kHz)
75	DAVN	I	Data transmit completed detect signal input from the RDS decoder (IC701) "H" active
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
77	BU-IN	I	Battery detect signal input from the SONY bus interface (IC504) and battery detect circuit "L" is input at low voltage
78	$\overline{\text{ILL IN}}$	I	Auto dimmer control illumination line detection signal input terminal "L" is input at dimmer detection
79	TEL-ATT	I	Telephone muting signal input terminal At input of "L", the signal is attenuated by –20 dB
80	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection switch (SW503) signal input terminal "L": front panel is attached
81	$\overline{\text{ACC IN}}$	I	Accessory detect signal input terminal "L": accessory on
82 to 85	TIR-D0 to TIR-D3	I/O	Two-way data bus with the MSM6688GS (IC703)
86	HSTX	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC505) and reset switch (SW701) "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95	TIR-BUSY	I	Busy detection signal input from the MSM6688GS (IC703) "H" is output while MSM6688GS (IC703) is executing a command
96	$\overline{\text{TIR-WR}}$	O	Data write strobe signal output to the MSM6688GS (IC703) "L" is output when data (D0 to D3) are output to the MSM6688GS (IC703)
97	TIR-CE	O	Chip enable signal output to the MSM6688GS (IC703) TIR-WR (pin ⑨⑥) or TIR-RD (pin ⑩①) is accepted when CE is "L" or $\overline{\text{CE}}$ is "H" respectively TIR-WR (pin ⑨⑥) or TIR-RD (pin ⑩①) is not accepted when CE is "H" or $\overline{\text{CE}}$ is "L" respectively
98	$\overline{\text{TIR-CE}}$	O	
99	TIR-RES	O	Reset signal output to the MSM6688GS (IC703) "H": reset
100	$\overline{\text{TIR-PDOWN}}$	O	Power down control signal output to the MSM6688GS (IC703) "L": power down
101	$\overline{\text{TIR-RD}}$	O	Data read strobe signal output to the MSM6688GS (IC703) "L" is output when data (D0 to D3) are output to the MSM6688GS (IC703)
102	MTLIN	I	Not used (fixed at "L")
103	$\overline{\text{AM STIN}}$	I	Not used (fixed at "L")
104	LOCK	I	Mini-disc lock detection signal input from the MD mechanism controller (IC501) "H": lock CLV lock status input in test mode
105 to108	POS0 to POS3	I	Not used (fixed at "L")
109	MD-ATT	I	The audio muting control signal is input from the MD mechanism controller (IC501), and output to ATT (pin ⑥⑤)

Pin No.	Pin Name	I/O	Function
110	BBE	O	Not used (open)
111	LINKOFF	O	Not used (pull down)
112	LO	O	Not used (open)
113	PRO	O	Not used (open)
114	DM0	O	Not used (pull down)
115	DM1	I/O	Not used (open)
116	IIS	I/O	Not used (open)
117	CSV-NAR	I	“H” is input when RS-164 (IC901) sends data
118	LED-ON	O	Illumination LED drive signal output terminal “H”: LED on Also, power amp (IC600) standby on/off control is executed “L”: standby, “H”: amp on
119	VSS	—	Ground terminal
120	POWON	O	Main system power supply on/off control signal output to the BA3918 (IC506) “H”: power on

• **SERVO BOARD IC501 CXP84340-201Q (MD MECHANISM CONTROLLER)**

Pin No.	Pin Name	I/O	Function
1 to 5	TIN3 to TIN7	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)
6	LOAD	O	Loading motor control signal output to the motor driver (IC305) *1
7	EJECT	O	Loading motor control signal output to the motor driver (IC305) *1
8, 9	NCO	O	Not used (open)
10	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply and loading motor drive (IC305) power supply “H”: power on
11	$\overline{\text{E-SW}}$	I	Inputs the disc loading completion detect switch detection signal “L”: When completed of the disc loading operation
12	AG-OK	O	Output of aging status in test mode “H”: aging completed, “L”: under aging Not used (open)
13	ADJ-OK	O	Output of status when aging completed in test mode “H”: aging OK, “L”: aging NG Not used (open)
14 to 17	NCO	O	Not used (open)
18	DFCTSEL	I	Select whether defect function is used for the CXD2652AR (IC301) “H”: not used this function, “L”: used this function (fixed at “H” in this set)
19	DPLLSEL	I	Select whether digital pll function is used for the CXD2652AR (IC301) “H”: not used this function, “L”: used this function (fixed at “H” in this set)
20	EMPHSEL	I	Select whether emphasis signal output from pin or unilink data “H”: output from pin only, “L”: outputs from both pin and unilink data (fixed at “H” in this set)
21	LOCK	O	Mini-disc lock detection signal output to the master controller (IC500) “H”: lock
22	NCO	O	Not used (open)
23	2M/$\overline{\text{4M}}$	I	Select whether D-RAM capacitance 2M bit or 4M bit “H”: 2M bit (internal D-RAM of IC301 CXD2652AR), “L”: 4M bit (external D-RAM) (fixed at “L” in this set)
24, 25	NCO	O	Not used (open)
26	MNT0	I	Focus OK signal input from the CXD2652AR (IC301) “H” is input when focus is on (“L”: NG)
27	MNT1	I	Track jump detection signal input from the CXD2652AR (IC301)
28	MNT2	I	Monitor 2 signal input from the CXD2652AR (IC301)
29	MNT3	I	Monitor 3 signal input from the CXD2652AR (IC301)
30	$\overline{\text{RESET}}$	I	System reset signal input from the master controller (IC500), reset signal generator (IC505) and reset switch (SW701) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
31	EXTAL	O	Main system clock output terminal (10 MHz)
32	XTAL	I	Main system clock input terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal (32.768 kHz) Not used (open)
35	TEX	I	Sub system clock input terminal (32.768 kHz) Not used (fixed at “L”)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V) (for A/D converter)
38	INIT	I	Initial reset signal input terminal (A/D input) (fixed at “H”)
39	TEMP	I	Temperature sensor (TH501) input terminal (A/D input)
40	ACNT	I	Select the number of load/eject aging times (A/D input) 0H – 54H (30 times), 55H – OA9H (20 times), OAAH – OFFH (10 times)
41	DO-SEL	I	Select the digital output bits (A/D input)
42	EE-CS	O	Chip select signal output to the external EEPROM device Not used (open)
43	EE-CKO	O	Serial data transfer clock signal output to the external EEPROM device Not used (open)
44	EE-SIO	I/O	Two way data bus with the external EEPROM device Not used (open)
45	MD-SO	O	Writing serial data signal output to the CXD2652AR (IC301) and CXA2523R (IC302)
46	LINKOFF	O	Unilink on/off control signal output to the SONY bus interface (IC504) “H”: link off, “L”: link on

Pin No.	Pin Name	I/O	Function
47	UNIREQ	O	Data request signal output terminal (for SONY bus) "H": request on Not used (open)
48	UNICKI	I	Serial data transfer clock signal input from the master controller (IC500) (for SONY bus)
49	UNISI	I	Serial data input from the SONY bus interface (IC504)
50	UNISO	O	Serial data output to the SONY bus interface (IC504)
51	MD-CKO	O	Serial data transfer clock signal output to the CXD2652AR (IC301) and CXA2523R (IC302)
52	MD-SI	I	Reading serial data signal input from the CXD2652AR (IC301)
53	NCO	O	Not used (open)
54	SENS	I	Internal status (SENSE) input from the CXD2652AR (IC301)
55	CC-XINT	I	Interrupt status input from the CXD2652AR (IC301)
56	$\overline{\text{LIMIT-IN}}$	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when "L"
57	EJT-KEY	I	Eject request signal input terminal "L": eject on Not used (fixed at "H")
58	ERROR-PWM	O	PWM error monitor output terminal (C1and ATER is output when test mode) Not used (open)
59	$\overline{\text{MD-RST}}$	O	Reset signal output to the D/A converter (IC101), CXD2652AR (IC301) and BH6511FS (IC303) "L": reset
60	BU-IN	I	Battery detect signal input from the SONY bus interface (IC504) and battery check circuit "H": battery on
61	$\overline{\text{BUS-ON}}$	I	SONY bus on/off control signal input from the master controller (IC500) "L": bus on
62	SQSY	I	Subcode Q sync (SCOR) input from the CXD2652AR (IC301) "L" is input every 13.3 msec Almost all, "H" is input
63	$\overline{\text{C-SW}}$	I	Inputs the disc loading start or disc eject completion detect switch detection signal "L": When start or eject completed of the disc loading operation
64	MD-LAT	O	Serial data latch pulse signal output to the CXD2652AR (IC301) and CXA2523R (IC302)
65	MD-ON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply "H": power on
66	DEEMP	O	Emphasis on/off control signal output to the D/A converter (IC101) "H": emphasis on
67	A-MUTE	O	Audio muting on/off control signal output to the master controller (IC500) "H": muting on
68	NCO	O	Not used (open)
69	TSTCKO	O	Output of clock signal for the test mode display Not used (open)
70	TSTSO	O	Output of data for the test mode display Not used (open)
71	$\overline{\text{TSTMOD}}$	I	Setting terminal for the test mode "L": test mode, "H": normal mode
72	VCC	—	Power supply terminal (+5V)
73	NC	I	Not used (fixed at "H")
74 to 77	TOUT0 to TOUT3	O	Output of the 4×8 matrix test keys Not used (open)
78 to 80	TIN0 to TIN2	I/O	Input of the 4×8 matrix test keys ("L" is always output, except in test mode) Not used (open)

*1 Loading motor (M903) control

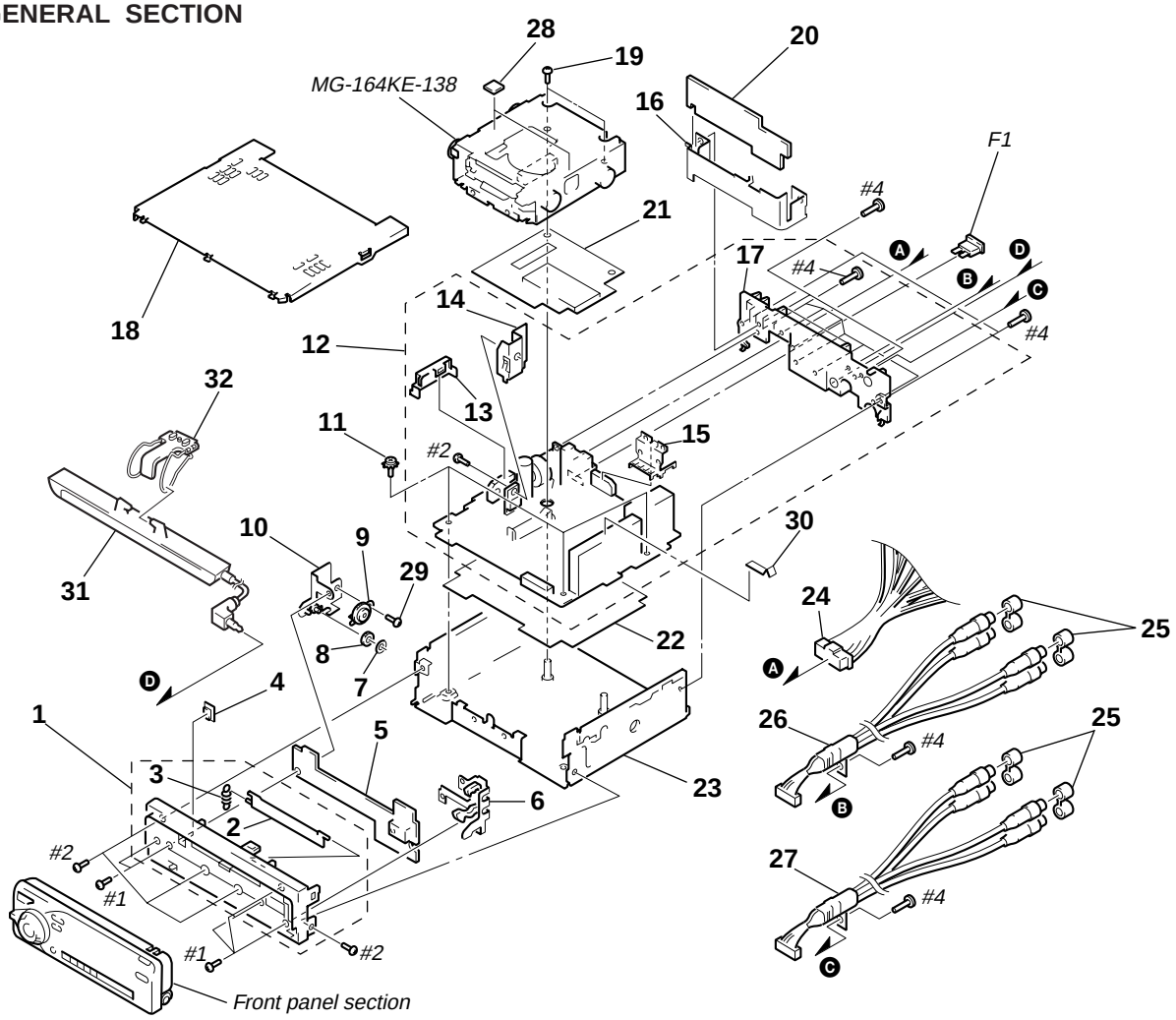
Operation / Terminal	IN	OUT	BRAKE	STOP
LOAD (pin ⑥)	"H"	"L"	"H"	"L"
EJECT (pin ⑦)	"L"	"H"	"H"	"L"

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

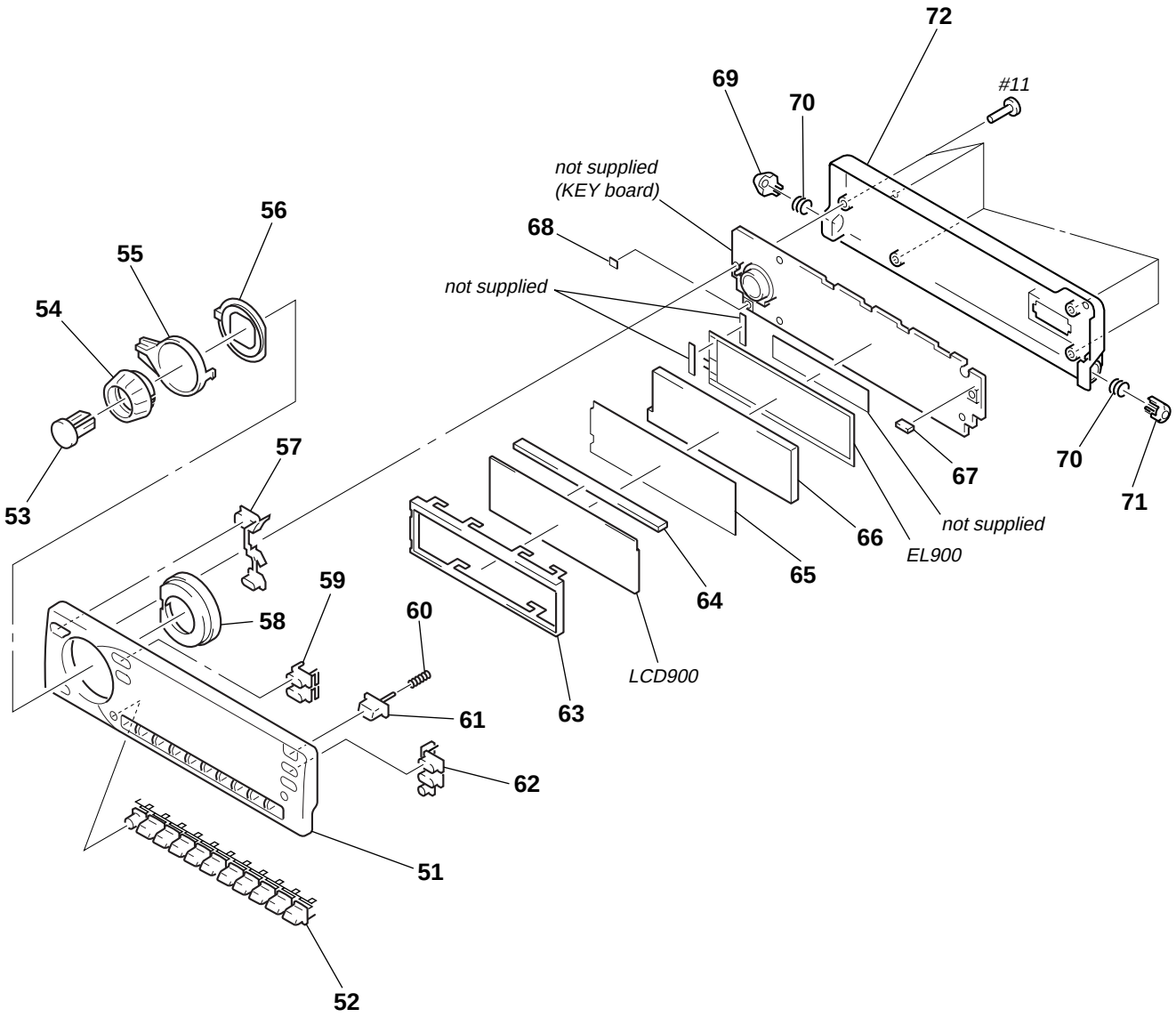
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	X-3375-471-1	PANEL ASSY, SUB	
2	3-025-483-01	DOOR (MD)	
3	3-025-484-01	SPRING (DOOR)	
4	3-022-338-01	BUTTON (EJECT) (⏏)	
* 5	1-671-080-11	SUB TRANSLATION BOARD	
6	X-3375-068-1	LOCK ASSY	
7	3-341-752-11	WASHER, POLYETHYLENE	
8	3-011-170-01	GEAR (HOLDER)	
9	3-953-235-01	DAMPER, OIL	
10	X-3375-066-1	BRACKET (GEAR) ASSY	
11	3-915-923-01	SCREW, GROUND POINT	
* 12	A-3294-510-A	MAIN BOARD, COMPLETE (AEP, UK)	
* 12	A-3294-513-A	MAIN BOARD, COMPLETE (German)	
* 13	3-011-078-01	BRACKET (POWER IC)	
* 14	3-029-078-01	HEAT SINK	
* 15	3-022-317-01	BRACKET (AMP)	
* 16	3-026-537-01	BRACKET (AUDIO)	
* 17	3-025-481-11	HEAT SINK	
* 18	3-022-316-31	COVER	
19	3-932-860-01	SCREW (2.6X4) (C TIGHT), +PTT	
* 20	A-3294-511-A	AUDIO BOARD, COMPLETE	
* 21	3-028-408-01	PLATE (2), SHIELD	
* 22	3-024-952-01	SHEET, INSULATING	
* 23	X-3375-753-1	CHASSIS ASSY	
24	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
25	3-339-410-01	COVER (2), PIN JACK	
26	1-783-862-41	CORD (WITH CONNECTOR) (RCA) (FRONT AUDIO OUT, BUS AUDIO IN)	
27	1-783-862-31	CORD (WITH CONNECTOR) (RCA) (REAR AUDIO OUT, SUB WOOFER OUT)	
28	3-011-999-01	CUSHION (MD)	
29	3-713-786-51	SCREW +P 2X3	
* 30	3-355-209-01	PLATE (B), GROUND	
31	1-475-982-11	MICROPHONE UNIT	
32	X-3375-861-1	HOLDER (MIC) ASSY	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	

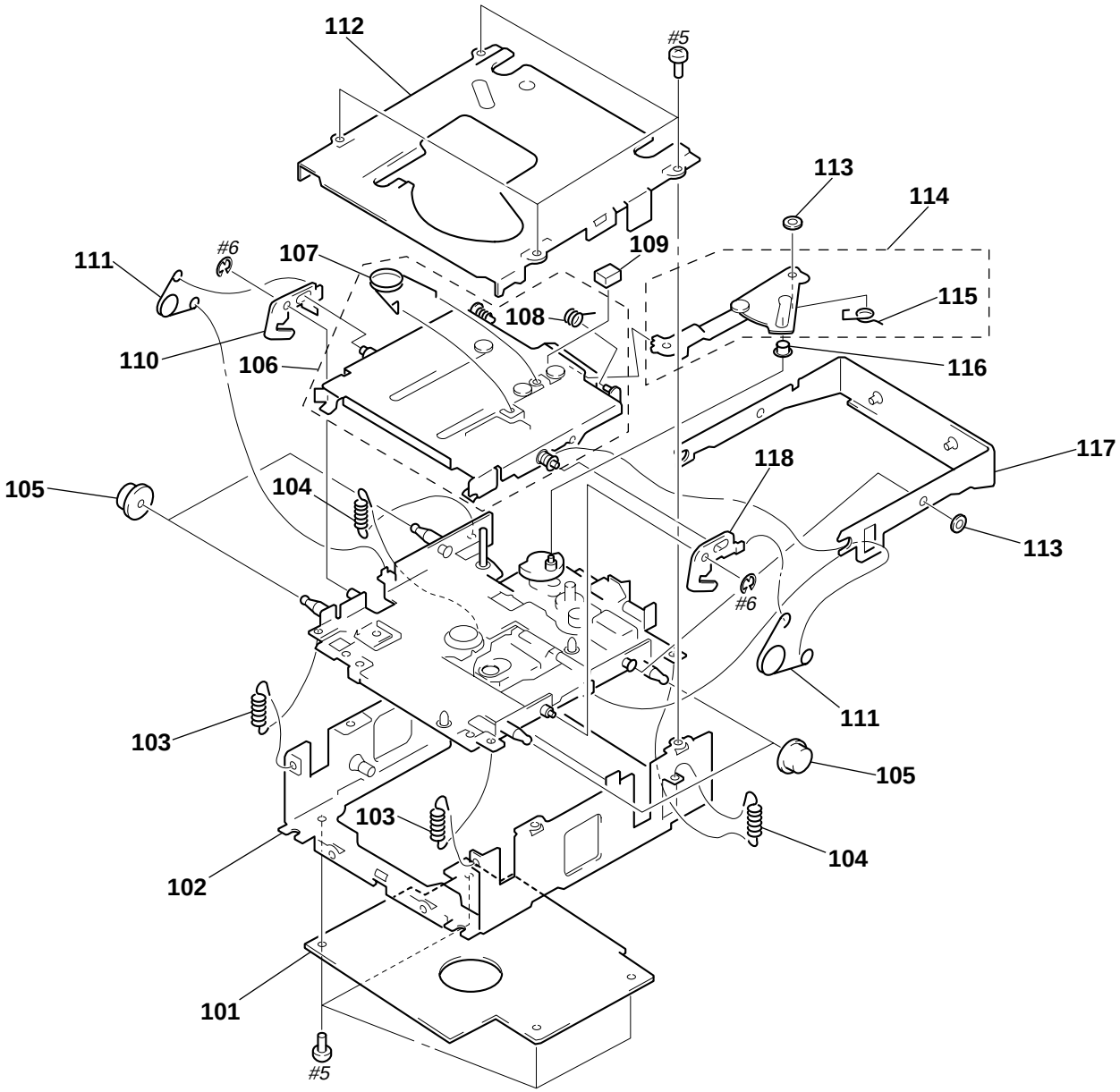
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3375-960-1	PANEL SUB ASSY, FRONT	
52	3-022-332-01	BUTTON (10 KEY) (SHIFT. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10)	
53	3-022-329-01	BUTTON (SOURCE)	
54	3-022-322-01	KNOB	
55	3-022-323-01	LEVER (SHUTTLE) (+ ▶▶I ▶▶. ◀◀ I◀◀ –. SEEK/AMS)	
56	3-022-324-01	PLATE (SHUTTLE), LIGHT GUIDE	
57	3-022-330-11	BUTTON (MODE) (MODE. OFF)	
58	3-022-325-01	PLATE (RING), LIGHT GUIDE	
59	3-022-331-01	BUTTON (SOUND) (SOUND. DSPL)	
60	3-932-225-01	SPRING (OPEN)	
61	3-022-333-01	BUTTON (OPEN)	
62	3-022-308-01	BUTTON (PTY) (PTY. AF/TA. TIR)	

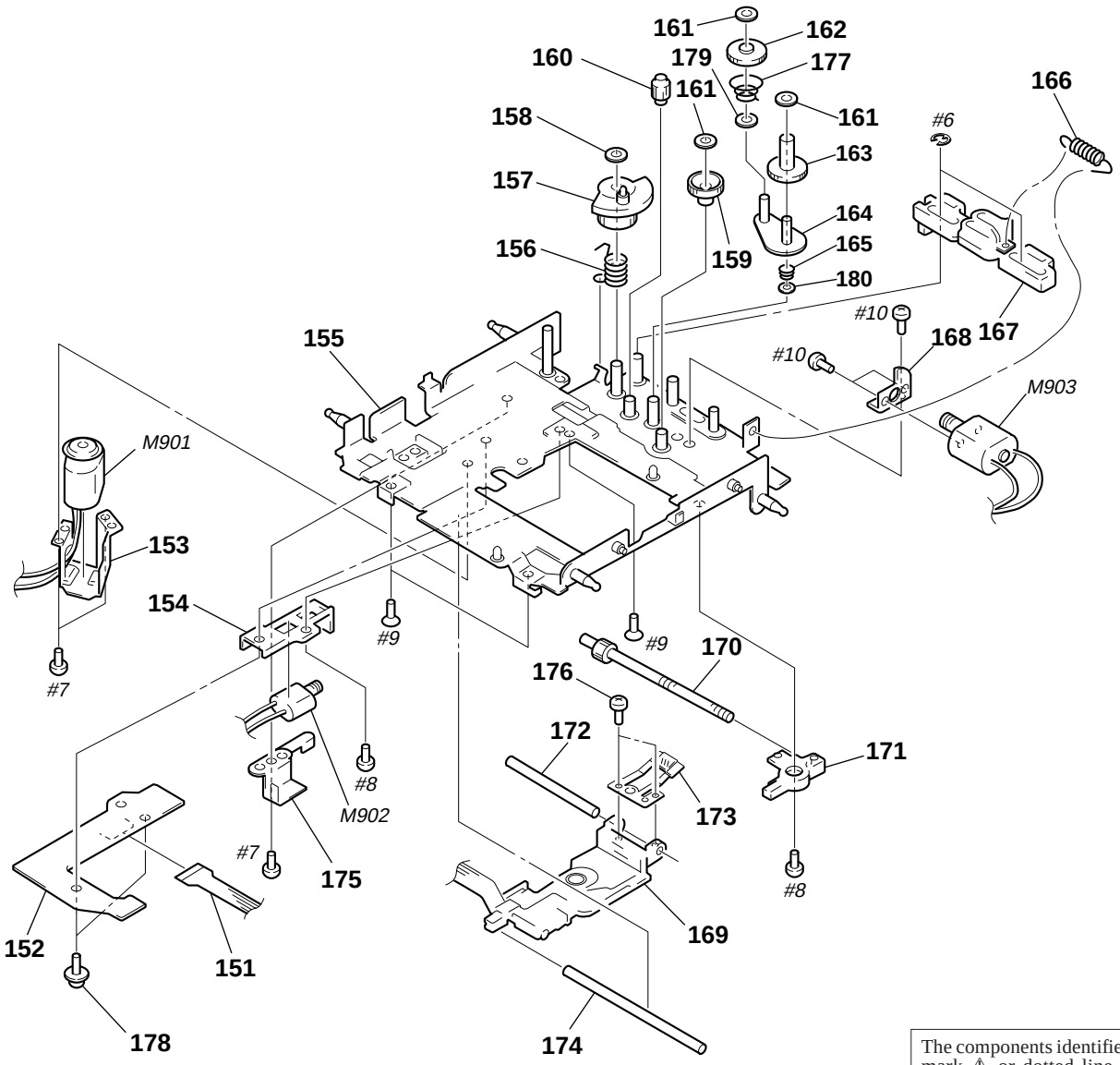
Ref. No.	Part No.	Description	Remark
* 63	3-022-327-01	PLATE (LCD), GROUND	
64	1-694-414-11	CONDUCTOR BOARD, CONNENTION (RUBBER CONNECTOR)	
* 65	3-022-328-01	ILLUMINATOR (LCD)	
* 66	3-022-326-01	PLATE (LCD), LIGHT GUIDE	
67	3-017-983-01	CUSHION (10)	
68	3-327-119-01	SPACER (A)	
69	3-010-999-01	BEARING (L)	
70	3-010-998-01	SPRING (BEARING)	
71	3-011-000-01	BEARING (R)	
72	3-022-319-01	PANEL, FRONT BACK	
EL900	1-517-766-11	LIGHT, ELECTRO LUMINESCENT	
LCD900	1-803-107-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION-1 (MG-164KE-138)



Ref. No.	Part No.	Description	Remark
* 101	A-3317-122-A	SERVO BOARD, COMPLE	
* 102	X-3369-440-1	CHASSIS ASSY, MD	
103	3-919-296-01	SPRING (FL), TENSION	
104	3-921-111-01	SPRING (FL2), TENSION	
105	3-919-273-01	DAMPER, OIL	
* 106	X-3375-402-1	HOLDER ASSY (W)	
107	3-919-319-01	SPRING (HOLDER)	
108	3-919-320-01	SPRING (SUB HOLDER)	
* 109	3-919-436-01	CUSHION (EJ)	
* 110	3-919-280-01	LEVER (LOCK R)	
111	3-919-281-01	SPRING (CHKG)	
* 112	X-3375-444-1	COVER ASSY (2), MD	
113	3-342-940-01	WASHER (M)	
* 114	X-3375-443-1	LEVER (LE28) ASSY	
115	3-024-249-01	SPRING (LE2)	
116	3-925-034-01	ROLLER (GLE)	
* 117	X-3369-443-1	ARM ASSY, CHUCKING	
* 118	3-919-279-01	LEVER (LOCK L)	

(4) MECHANISM DECK SECTION-2 (MG-164KE-138)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	1-654-693-11	SENSOR FLEXIBLE BOARD	
152	A-3309-892-A	SENSOR BOARD, COMPLETE	
* 153	3-919-297-01	RETAINER (SP)	
* 154	3-919-284-01	BASE (SL)	
* 155	X-3375-796-2	CHASSIS (OPV) ASSY	
156	3-919-339-01	SPRING (GLE)	
157	3-919-317-01	GEAR (LE)	
158	4-926-562-01	WASHER, STOPPER	
159	3-919-313-01	WHEEL, WORM	
160	3-919-316-01	GEAR (R)	
161	3-342-940-01	WASHER (M)	
162	3-919-315-01	GEAR (S)	
163	3-919-314-01	GEAR (F)	
164	X-3369-446-1	LEVER (S) ASSY	
165	3-025-212-01	SPRING (KS2)	
166	3-919-282-01	SPRING (RACK), TENSION	
167	X-3369-447-1	RACK ASSY	
* 168	3-919-312-01	BRACKET (MOTOR)	
⚠169	8-583-046-05	OPTICAL PICK-UP KMS-241B/J2RP	
170	X-3373-213-1	SCREW ASSY, FEED	
* 171	3-919-294-01	BEARING (SL)	
* 172	3-919-293-01	SHAFT (SL)	
173	3-010-091-01	SPRING (SL FEED)	
* 174	3-920-537-01	SHAFT (SL2)	
* 175	3-919-283-01	BRACKET (SL)	
176	3-703-816-32	SCREW (M1.4X1.6), SPECIAL HEAD	
177	3-924-721-01	SPRING (B-T)	
178	2-626-617-01	SCREW (2X8)	
179	3-701-437-01	WASHER	
180	3-025-752-01	WASHER, POLYETHYLENE	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

SECTION 6
ELECTRICAL PARTS LIST

AUDIO

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3294-511-A	AUDIO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C902	1-126-204-11	ELECT CHIP	47uF	20%	16V
C903	1-126-200-11	ELECT CHIP	10uF	20%	35V
C904	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C905	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C906	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C907	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C908	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C909	1-164-346-11	CERAMIC CHIP	1uF		16V
C910	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C911	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C912	1-164-346-11	CERAMIC CHIP	1uF		16V
C913	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C914	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C915	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C916	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C917	1-164-346-11	CERAMIC CHIP	1uF		16V
C918	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C919	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C920	1-126-200-11	ELECT CHIP	10uF	20%	35V
C921	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C922	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C923	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C924	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C925	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C926	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C927	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C928	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C929	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C930	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C931	1-164-346-11	CERAMIC CHIP	1uF		16V
C932	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN901	1-784-616-11	CONNECTOR, BOARD TO BOARD 14P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D901	8-719-422-53	DIODE MA8056-M-TX			
		< FERRITE BEAD >			
FB901	1-500-239-21	BEAD, FERRITE (CHIP)			
		< IC >			
IC901	8-759-538-27	IC RSC-164			
IC902	8-759-534-72	IC MBM29F800TA			
IC903	8-759-547-61	IC MSM534001E-14TSKFDR3			
IC904	8-759-711-82	IC NJM4580E			
IC905	8-759-075-56	IC BA10324AF-T2			
IC906	8-759-058-62	IC TC7S08FU (TE85R)			
IC907	8-759-058-64	IC TC7S32FU (TE85R)			
IC908	8-759-082-58	IC TC7W08FU			
		< COIL >			
L901	1-216-296-00	CONDUCTOR, CHIP			
L903	1-412-060-11	INDUCTOR CHIP 22uH			
L904	1-216-296-00	CONDUCTOR, CHIP			
L905	1-216-296-00	CONDUCTOR, CHIP			
		< TRANSISTOR >			
Q901	8-729-920-85	TRANSISTOR 2SD1664-QR			
		< RESISTOR >			
R901	1-216-809-11	METAL CHIP	100	5%	1/16W
R902	1-216-821-11	METAL CHIP	1K	5%	1/16W
R903	1-216-837-11	METAL CHIP	22K	5%	1/16W
R904	1-216-833-11	METAL CHIP	10K	5%	1/16W
R905	1-216-833-11	METAL CHIP	10K	5%	1/16W
R906	1-216-843-11	METAL CHIP	68K	5%	1/16W
R907	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R908	1-216-851-11	METAL CHIP	330K	5%	1/16W
R909	1-216-841-11	METAL CHIP	47K	5%	1/16W
R910	1-216-842-11	METAL CHIP	56K	5%	1/16W
R911	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R912	1-216-851-11	METAL CHIP	330K	5%	1/16W
R913	1-216-049-11	RES, CHIP	1K	5%	1/10W
R914	1-216-855-11	METAL CHIP	680K	5%	1/16W
R915	1-216-826-11	METAL CHIP	2.7K	5%	1/16W

AUDIO **KEY**

Ref. No.	Part No.	Description			Remark
R916	1-216-821-11	METAL CHIP	1K	5%	1/16W
R917	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R918	1-216-833-11	METAL CHIP	10K	5%	1/16W
R919	1-218-727-11	METAL CHIP	30K	0.5%	1/16W
R920	1-216-845-11	METAL CHIP	100K	5%	1/16W
R921	1-216-994-11	RES, CHIP	13K	5%	1/16W
R922	1-216-845-11	METAL CHIP	100K	5%	1/16W
R923	1-216-821-11	METAL CHIP	1K	5%	1/16W
R924	1-216-833-11	METAL CHIP	10K	5%	1/16W
R925	1-218-727-11	METAL CHIP	30K	0.5%	1/16W
R926	1-216-833-11	METAL CHIP	10K	5%	1/16W
R927	1-216-813-11	METAL CHIP	220	5%	1/16W
R928	1-216-813-11	METAL CHIP	220	5%	1/16W
R929	1-216-813-11	METAL CHIP	220	5%	1/16W
R930	1-216-813-11	METAL CHIP	220	5%	1/16W
R931	1-216-837-11	METAL CHIP	22K	5%	1/16W
R932	1-216-817-11	RES, CHIP	470	5%	1/16W
R933	1-216-817-11	RES, CHIP	470	5%	1/16W
R934	1-216-817-11	RES, CHIP	470	5%	1/16W
R935	1-216-837-11	METAL CHIP	22K	5%	1/16W
R936	1-216-821-11	METAL CHIP	1K	5%	1/16W
R937	1-216-841-11	METAL CHIP	47K	5%	1/16W
R938	1-216-841-11	METAL CHIP	47K	5%	1/16W
R939	1-216-821-11	METAL CHIP	1K	5%	1/16W
R950	1-216-841-11	METAL CHIP	47K	5%	1/16W
R951	1-216-842-11	METAL CHIP	56K	5%	1/16W
R952	1-216-864-11	METAL CHIP	0	5%	1/16W
R960	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
		< CONPOSITION CIRCUIT BLOCK >			
RB901	1-233-577-11	RES, CHIP NETWORK 470			
RB902	1-233-577-11	RES, CHIP NETWORK 470			
RB903	1-233-577-11	RES, CHIP NETWORK 470			
RB904	1-233-577-11	RES, CHIP NETWORK 470			
RB905	1-233-577-11	RES, CHIP NETWORK 470			
RB906	1-233-577-11	RES, CHIP NETWORK 470			
RB907	1-233-577-11	RES, CHIP NETWORK 470			
		< VIBRATOR >			
X901	1-781-090-21	VIBRATOR, CRYSTAL (14.31818MHz)			

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KEY BOARD
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	1-694-414-11	CONDUCTOR BOARD, CONNENTION (RUBBER CONNECTOR)			
	3-017-983-01	CUSHION (10)			
*	3-022-326-01	PLATE (LCD), LIGHT GUIDE			
*	3-022-327-01	PLATE (LCD), GROUND			
*	3-022-328-01	ILLUMINATOR (LCD)			
	3-327-119-01	SPACER (A)			
		< CAPACITOR >			
C900	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C901	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C902	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN900	1-778-183-11	PLUG, CONNECTOR 18P	
		< DIODE >	
D901	8-719-420-90	DIODE MA8051-M	
D903	8-719-420-90	DIODE MA8051-M	
		< EL LUMINOUS ELEMENT >	
EL900	1-517-766-11	LIGHT, ELECTRO LUMINESCENT	
		< IC >	
IC900	8-759-496-75	IC uPD16432BGC-018-9EU	
IC901	8-749-012-25	IC RS-170-TU	
		< SHORT >	
JW900	1-216-295-00	SHORT 0	
		< LIQUID CRYSTAL DISPLAY >	
LCD900	1-803-107-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< LED >	
LED900	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED901	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED902	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED903	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED904	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED905	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED906	8-719-033-13	LED CL-170Y-CD-T (ILLUMINATION)	
LED907	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION)	
		< SWITCH >	
LSW900	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(OFF)	
LSW901	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(MODE)	
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(SOURCE)	
LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(SOUND)	
LSW904	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(DSPL)	
LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(SHIFT)	
LSW906	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(1)	
LSW907	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(2)	
LSW908	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(3)	
LSW909	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(PTY, LIST)	
LSW910	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(AF/TA)	
LSW911	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(TIR)	
LSW912	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(10)	
LSW913	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(9)	
LSW914	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(8)	
LSW915	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(7)	
LSW916	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(6)	
LSW917	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(5)	
LSW918	1-762-620-21	SWITCH, KEY BOARD (WITH LED)(4)	
		< TRANSISTOR >	
Q900	8-729-904-66	TRANSISTOR DTD113EK	
Q901	8-729-904-66	TRANSISTOR DTD113EK	
Q902	8-729-424-08	TRANSISTOR UN2111	
Q903	8-729-424-08	TRANSISTOR UN2111	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R901	1-216-045-00	METAL CHIP	680	5%	1/10W
R902	1-216-045-00	METAL CHIP	680	5%	1/10W
R903	1-216-045-00	METAL CHIP	680	5%	1/10W
R904	1-216-049-11	RES, CHIP	1K	5%	1/10W
R905	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R906	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R907	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R908	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R909	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R910	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R911	1-216-045-00	METAL CHIP	680	5%	1/10W
R912	1-216-045-00	METAL CHIP	680	5%	1/10W
R913	1-216-045-00	METAL CHIP	680	5%	1/10W
R914	1-216-049-11	RES, CHIP	1K	5%	1/10W
R915	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R916	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R917	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R918	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R919	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R920	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R931	1-216-037-00	METAL CHIP	330	5%	1/10W
R932	1-216-041-00	METAL CHIP	470	5%	1/10W
R933	1-216-037-00	METAL CHIP	330	5%	1/10W
R935	1-216-182-00	RES, CHIP	220	5%	1/8W
R936	1-216-182-00	RES, CHIP	220	5%	1/8W
R937	1-216-037-00	METAL CHIP	330	5%	1/10W
R938	1-216-037-00	METAL CHIP	330	5%	1/10W
R939	1-216-194-00	METAL CHIP	680	5%	1/8W
R941	1-216-025-00	RES, CHIP	100	5%	1/10W
R942	1-216-041-00	METAL CHIP	470	5%	1/10W
R943	1-216-025-00	RES, CHIP	100	5%	1/10W
R944	1-216-041-00	METAL CHIP	470	5%	1/10W
R945	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R946	1-216-089-00	RES, CHIP	47K	5%	1/10W
R947	1-216-089-00	RES, CHIP	47K	5%	1/10W
R948	1-216-049-11	RES, CHIP	1K	5%	1/10W
R949	1-216-049-11	RES, CHIP	1K	5%	1/10W
R950	1-216-049-11	RES, CHIP	1K	5%	1/10W
R951	1-216-049-11	RES, CHIP	1K	5%	1/10W
R952	1-216-093-00	METAL CHIP	68K	5%	1/10W
R953	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R954	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R955	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R956	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R957	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R958	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
		< ROTARY ENCODER >			
RE900	1-475-014-11	ENCODER, ROTARY (VOLUME/BASS/TREBLE/ BALANCE/FADERCONTROL)			
		< SWITCH >			
S900	1-771-290-11	SWITCH, SLIDE (– ◀◀ I◀◀ SEEK/AMS ▶▶I ▶▶ +)			

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Ref. No.	Part No.	Description			Remark
*	A-3294-510-A	MAIN BOARD, COMPLETE (AEP, UK)			
*	A-3294-513-A	MAIN BOARD, COMPLETE (German)			
		**********			
*	3-011-078-01	BRACKET (POWER IC)			
*	3-022-317-01	BRACKET (AMP)			
*	3-025-481-11	HEAT SINK			
*	3-029-078-01	HEAT SINK			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< BUZZER >			
BZ501	1-504-920-11	BUZZER			
		< CAPACITOR >			
C1	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C12	1-110-355-11	MYLAR	0.0022uF	5%	50V
C13	1-136-153-00	FILM	0.01uF	5%	50V
C14	1-110-351-11	MYLAR	0.001uF	5%	50V
C15	1-136-165-00	FILM	0.1uF	5%	50V
C16	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C17	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C18	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C19	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C20	1-136-165-00	FILM	0.1uF	5%	50V
C21	1-136-169-00	FILM	0.22uF	5%	50V
C22	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C23	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C24	1-124-779-00	ELECT CHIP	10uF	20%	16V
C25	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C26	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C27	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C28	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C29	1-117-681-11	ELECT CHIP	100uF	20%	16V
C30	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C31	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C35	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-163-037-11	CERAMIC CHIP	0.022uF	10%	50V
C38	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C39	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C40	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C42	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C43	1-126-395-11	ELECT	22uF	20%	16V
C44	1-117-681-11	ELECT CHIP	100uF	20%	16V
C45	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C46	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C47	1-117-681-11	ELECT CHIP	100uF	20%	16V
C48	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C49	1-117-681-11	ELECT CHIP	100uF	20%	16V
C51	1-126-204-11	ELECT CHIP	47uF	20%	16V
C52	1-126-204-11	ELECT CHIP	47uF	20%	16V
C93	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C94	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C99	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C100	1-126-767-11	ELECT	1000uF	20%	16V
C101	1-128-390-11	ELECT CHIP	220uF	20%	6.3V
C102	1-117-681-11	ELECT CHIP	100uF	20%	16V
C103	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C104	1-164-506-11	CERAMIC CHIP	4.7uF		16V

MAIN

Ref. No.	Part No.	Description			Remark
C105	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C106	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C107	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C108	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C109	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C110	1-126-200-11	ELECT CHIP	10uF	20%	35V
C111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C112	1-126-200-11	ELECT CHIP	10uF	20%	35V
C113	1-163-259-00	CERAMIC CHIP	220PF	5%	50V
C114	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C115	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C116	1-163-259-00	CERAMIC CHIP	220PF	5%	50V
C200	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C201	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C202	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C203	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C204	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C205	1-126-200-11	ELECT CHIP	10uF	20%	35V
C206	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C207	1-126-200-11	ELECT CHIP	10uF	20%	35V
C208	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C209	1-126-395-11	ELECT	22uF	20%	16V
C210	1-126-395-11	ELECT	22uF	20%	16V
C211	1-126-204-11	ELECT CHIP	47uF	20%	16V
C212	1-117-681-11	ELECT CHIP	100uF	20%	16V
C213	1-117-681-11	ELECT CHIP	100uF	20%	16V
C214	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C215	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C216	1-126-200-11	ELECT CHIP	10uF	20%	35V
C217	1-126-200-11	ELECT CHIP	10uF	20%	35V
C218	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C224	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C225	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C226	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C227	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C228	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C229	1-126-395-11	ELECT	22uF	20%	16V
C230	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C231	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C232	1-124-779-00	ELECT CHIP	10uF	20%	16V
C235	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C300	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C301	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C302	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C303	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C304	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C305	1-126-200-11	ELECT CHIP	10uF	20%	35V
C306	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C307	1-126-200-11	ELECT CHIP	10uF	20%	35V
C308	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C309	1-126-395-11	ELECT	22uF	20%	16V
C310	1-126-395-11	ELECT	22uF	20%	16V
C311	1-126-204-11	ELECT CHIP	47uF	20%	16V
C312	1-117-681-11	ELECT CHIP	100uF	20%	16V
C313	1-117-681-11	ELECT CHIP	100uF	20%	16V
C314	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C315	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C316	1-126-200-11	ELECT CHIP	10uF	20%	35V

Ref. No.	Part No.	Description			Remark
C317	1-126-200-11	ELECT CHIP	10uF	20%	35V
C318	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C324	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C325	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C326	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C327	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C328	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C329	1-126-395-11	ELECT	22uF	20%	16V
C330	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C331	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C332	1-124-779-00	ELECT CHIP	10uF	20%	16V
C335	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C400	1-126-395-11	ELECT	22uF	20%	16V
C401	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C403	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C407	1-117-681-11	ELECT CHIP	100uF	20%	16V
C408	1-164-346-11	CERAMIC CHIP	1uF		16V
C409	1-164-346-11	CERAMIC CHIP	1uF		16V
C415	1-107-686-11	TANTAL. CHIP	4.7uF	20%	16V
C416	1-107-686-11	TANTAL. CHIP	4.7uF	20%	16V
C417	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C418	1-126-395-11	ELECT	22uF	20%	16V
C419	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C421	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C447	1-124-779-00	ELECT CHIP	10uF	20%	16V
C500	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C501	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C502	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C503	1-163-225-11	CERAMIC CHIP	8PF	0.50PF	50V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C506	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C507	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C508	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C509	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C510	1-117-681-11	ELECT CHIP	100uF	20%	16V
C511	1-124-779-00	ELECT CHIP	10uF	20%	16V
C512	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C513	1-124-779-00	ELECT CHIP	10uF	20%	16V
C514	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C515	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C516	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C517	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C518	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C519	1-124-779-00	ELECT CHIP	10uF	20%	16V
C520	1-126-204-11	ELECT CHIP	47uF	20%	16V
C521	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C522	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C523	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C524	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C526	1-117-681-11	ELECT CHIP	100uF	20%	16V
C527	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C528	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C529	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C531	1-111-233-11	ELECT	5600uF	20%	16V
C532	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C534	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C535	1-164-505-11	CERAMIC CHIP	2.2uF		16V

Ref. No.	Part No.	Description			Remark
C536	1-124-779-00	ELECT CHIP	10uF	20%	16V
C537	1-124-779-00	ELECT CHIP	10uF	20%	16V
C538	1-124-779-00	ELECT CHIP	10uF	20%	16V
C539	1-124-779-00	ELECT CHIP	10uF	20%	16V
C540	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C541	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C542	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C543	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C551	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C554	1-126-204-11	ELECT CHIP	47uF	20%	16V
C555	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C556	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C558	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C600	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C601	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C602	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C603	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C604	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C605	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C606	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C607	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C608	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C609	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C610	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C615	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C616	1-128-400-11	ELECT CHIP	47uF	20%	25V
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C702	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C703	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C704	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C705	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C709	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C710	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C711	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C712	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C713	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C714	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C715	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C716	1-163-259-00	CERAMIC CHIP	220PF	5%	50V
C717	1-124-779-00	ELECT CHIP	10uF	20%	16V
C718	1-124-779-00	ELECT CHIP	10uF	20%	16V
C719	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C720	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C721	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C722	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C723	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C724	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C725	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR/JACK >			
CN1	1-764-808-21	JACK (ANT)			
CN101	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CN500	1-770-411-11	CONNECTOR, BOARD TO BOARD 20P			
CN501	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CN502	1-778-293-11	PLUG (MICRO CONNECTOR) 2P			
CN503	1-778-293-11	PLUG (MICRO CONNECTOR) 2P			
CN504	1-784-613-21	CONNECTOR, BOARD TO BOARD 14P			
* CN505	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P			

Ref. No.	Part No.	Description	Remark
* CN601	1-564-509-11	PLUG, CONNECTOR 6P	
* CN602	1-564-509-11	PLUG, CONNECTOR 6P	
CNJ500	1-566-822-41	JACK (REMOTE IN)	
CNJ501	1-691-258-21	JACK (MIC)	
CNP500	1-774-701-11	PIN, CONNECTOR 16P	
		< COMPOSITION CIRCUIT BLOCK >	
CP1	1-519-504-11	GAP, DISCHARGE	
		< DIODE >	
D5	8-719-977-03	DIODE DTZ5.6B	
D6	8-719-981-59	DIODE FC805	
D7	8-719-421-24	DIODE MA8039-H	
D8	8-719-422-97	DIODE MA8091-M	
D100	8-719-423-32	DIODE MA8120-M	
D101	8-719-313-73	DIODE SFPB-52	
D402	8-719-421-24	DIODE MA8039-H	
D403	8-719-421-24	DIODE MA8039-H	
D406	8-719-404-49	DIODE MA111	
D407	8-719-404-49	DIODE MA111	
D500	8-719-404-49	DIODE MA111	
D501	8-719-404-49	DIODE MA111	
D502	8-719-941-09	DIODE DAP202U	
D503	8-719-941-09	DIODE DAP202U	
D504	8-719-423-23	DIODE MA8110-M	
D505	8-719-404-49	DIODE MA111	
D506	8-719-423-32	DIODE MA8120-M	
D507	8-719-420-14	DIODE MA8082-M	
D508	8-719-422-31	DIODE MA8047-M	
D509	8-719-404-49	DIODE MA111	
D510	8-719-422-64	DIODE MA8062-M	
D511	8-719-422-64	DIODE MA8062-M	
D512	8-719-422-64	DIODE MA8062-M	
D513	8-719-422-64	DIODE MA8062-M	
D514	8-719-422-64	DIODE MA8062-M	
D515	8-719-422-64	DIODE MA8062-M	
D516	8-719-422-64	DIODE MA8062-M	
D517	8-719-422-64	DIODE MA8062-M	
D518	8-719-422-64	DIODE MA8062-M	
D519	8-719-422-64	DIODE MA8062-M	
D520	8-719-422-64	DIODE MA8062-M	
D521	8-719-422-64	DIODE MA8062-M	
D522	8-719-801-78	DIODE 1SS184	
D523	8-719-977-12	DIODE DTZ6.8B	
D524	8-719-022-90	DIODE MA8160M	
D525	8-719-801-78	DIODE 1SS184	
D526	8-719-977-12	DIODE DTZ6.8B	
D527	8-719-067-56	DIODE MA112-TX	
D528	8-719-017-67	DIODE MA8068H	
D529	8-719-404-49	DIODE MA111	
D530	8-719-422-64	DIODE MA8062-M	
D531	8-719-022-90	DIODE MA8160M	
D533	8-719-404-49	DIODE MA111	
D534	8-719-049-38	DIODE 1N5404TU	
D535	8-719-057-80	DIODE MA8160-M-TX	
D536	8-719-057-80	DIODE MA8160-M-TX	
D537	8-719-057-80	DIODE MA8160-M-TX	

MAIN

Ref. No.	Part No.	Description	Remark
D538	8-719-977-12	DIODE DTZ6.8B	
D539	8-719-404-49	DIODE MA111	
D540	8-719-022-90	DIODE MA8160M	
D541	8-719-053-18	DIODE 1SR154-400TE-25	
D542	8-719-053-18	DIODE 1SR154-400TE-25	
D543	8-719-977-12	DIODE DTZ6.8B	
D544	8-719-977-12	DIODE DTZ6.8B	
D545	8-719-977-12	DIODE DTZ6.8B	
D546	8-719-067-56	DIODE MA112-TX	
D547	8-719-422-49	DIODE MA8056-L	
D548	8-719-420-51	DIODE MA729	
D549	8-719-404-49	DIODE MA111	
D550	8-719-022-90	DIODE MA8160-M	
D601	8-719-053-18	DIODE 1SR154-400TE-25	
D602	8-719-053-18	DIODE 1SR154-400TE-25	
D603	8-719-053-18	DIODE 1SR154-400TE-25	
D604	8-719-053-18	DIODE 1SR154-400TE-25	
D605	8-719-053-18	DIODE 1SR154-400TE-25	
D606	8-719-053-18	DIODE 1SR154-400TE-25	
D607	8-719-053-18	DIODE 1SR154-400TE-25	
D608	8-719-053-18	DIODE 1SR154-400TE-25	
		< FUSE >	
F500	1-533-829-21	FUSE, CHIP	
		< IC >	
IC2	8-759-391-88	IC BU4066BCFV-E2	
IC4	8-759-448-85	IC BU2624FV-E2	
IC7	8-759-366-35	IC TC4W66F (TE12R)	
IC100	8-759-700-94	IC NJM5532M	
IC101	8-759-337-67	IC NJM2360AM (TE2)	
IC200	8-759-444-50	IC TDA8574 (T)	
IC300	8-759-444-50	IC TDA8574 (T)	
IC400	8-752-082-16	IC CXA1946BR	
IC401	8-759-711-82	IC NJM4580E	
IC402	8-759-711-82	IC NJM4580E	
IC403	8-752-083-07	IC CXA1846AN-T4	
IC404	8-759-711-82	IC NJM4580E	
IC500	8-759-541-67	IC MB90574PFV-G-131-BND	
IC501	8-759-495-75	IC NJM317F	
IC503	8-759-344-91	IC RN5VD23AA-TL	
IC504	8-759-449-89	IC BA8270F-E2	
IC505	8-759-443-41	IC RH5VL40AA-T1C	
IC506	8-759-347-50	IC BA3918-V3	
IC600	8-759-486-44	IC TDA7386	
IC701	8-759-492-59	IC SAA6588T-118	
IC702	8-759-180-46	IC MSM6685JSDR1	
IC703	8-759-374-66	IC MSM6688GS-2K	
IC704	8-759-366-35	IC TC4W66F (TE12R)	
		< COIL >	
L3	1-412-060-11	INDUCTOR CHIP 22uH	
L6	1-412-055-11	INDUCTOR CHIP 3.3uH	
L7	1-412-055-11	INDUCTOR CHIP 3.3uH	
L100	1-412-533-21	INDUCTOR 47uH	
L101	1-412-537-31	INDUCTOR 100uH	
L102	1-412-533-21	INDUCTOR 47uH	
L103	1-412-055-11	INDUCTOR CHIP 3.3uH	
L500	1-412-060-11	INDUCTOR CHIP 22uH	
L501	1-412-060-11	INDUCTOR CHIP 22uH	
L502	1-416-712-21	COIL, CHOKE	
L503	1-412-537-31	INDUCTOR 100uH	
L504	1-412-060-11	INDUCTOR CHIP 22uH	
L701	1-412-060-11	INDUCTOR CHIP 22uH	
L702	1-412-060-11	INDUCTOR CHIP 22uH	
L703	1-412-060-11	INDUCTOR CHIP 22uH	
		< TRANSISTOR >	
Q2	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q3	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q6	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q9	8-729-920-21	TRANSISTOR DTC314TKH04	
Q10	8-729-920-21	TRANSISTOR DTC314TKH04	
Q11	8-729-920-21	TRANSISTOR DTC314TKH04	
Q13	8-729-020-67	TRANSISTOR XN1A312-TX	
Q14	8-729-421-22	TRANSISTOR UN2211	
Q15	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q16	8-729-424-59	TRANSISTOR UN2212	
Q100	8-729-903-46	TRANSISTOR 2SB1132-P	
Q101	8-729-421-22	TRANSISTOR UN2211	
Q102	8-729-807-12	TRANSISTOR 2SD1802-S	
Q103	8-729-020-67	TRANSISTOR XN1A312-TX	
Q200	8-729-400-55	TRANSISTOR 2SD1328-S	
Q201	8-729-400-55	TRANSISTOR 2SD1328-S	
Q202	8-729-400-55	TRANSISTOR 2SD1328-S	
Q203	8-729-400-55	TRANSISTOR 2SD1328-S	
Q204	8-729-920-21	TRANSISTOR DTC314TKH04	
Q205	8-729-920-21	TRANSISTOR DTC314TKH04	
Q206	8-729-920-21	TRANSISTOR DTC314TKH04	
Q207	8-729-920-21	TRANSISTOR DTC314TKH04	
Q300	8-729-400-55	TRANSISTOR 2SD1328-S	
Q301	8-729-400-55	TRANSISTOR 2SD1328-S	
Q304	8-729-920-21	TRANSISTOR DTC314TKH04	
Q305	8-729-920-21	TRANSISTOR DTC314TKH04	
Q306	8-729-920-21	TRANSISTOR DTC314TKH04	
Q307	8-729-920-21	TRANSISTOR DTC314TKH04	
Q400	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q401	8-729-020-67	TRANSISTOR XN1A312-TX	
Q402	8-729-421-22	TRANSISTOR UN2211	
Q403	8-729-020-67	TRANSISTOR XN1A312-TX	
Q501	8-729-020-67	TRANSISTOR XN1A312-TX	
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q504	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q505	8-729-020-67	TRANSISTOR XN1A312-TX	
Q506	8-729-807-12	TRANSISTOR 2SD1802-S	
Q507	8-729-903-46	TRANSISTOR 2SB1132-P	
Q508	8-729-421-22	TRANSISTOR UN2211	
Q509	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q510	8-729-807-12	TRANSISTOR 2SD1802-S	
Q511	8-729-903-46	TRANSISTOR 2SB1132-P	
Q512	8-729-421-22	TRANSISTOR UN2211	
Q513	8-729-807-12	TRANSISTOR 2SD1802-S	

Ref. No.	Part No.	Description			Remark
Q514	8-729-421-22	TRANSISTOR	UN2211		
Q515	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q516	8-729-421-22	TRANSISTOR	UN2211		
Q517	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q518	8-729-822-84	TRANSISTOR	2SB1202FAST		
Q519	8-729-421-22	TRANSISTOR	UN2211		
Q520	8-729-424-08	TRANSISTOR	UN2111		
Q521	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q522	8-729-424-18	TRANSISTOR	UN2113		
Q523	8-729-024-31	TRANSISTOR	XN1111-TX		
Q524	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q525	8-729-807-12	TRANSISTOR	2SD1802-S		
Q526	8-729-424-59	TRANSISTOR	UN2212		
Q527	8-729-903-46	TRANSISTOR	2SB1132-P		
Q528	8-729-421-22	TRANSISTOR	UN2211		
Q529	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q532	8-729-021-94	TRANSISTOR	2SK1657-T1B		
Q533	8-729-900-53	TRANSISTOR	DTC114EK		
Q534	8-729-904-51	TRANSISTOR	DTB123EK		
Q535	8-729-424-12	TRANSISTOR	UN2112		
Q701	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q702	8-729-421-19	TRANSISTOR	UN2213		
Q703	8-729-424-59	TRANSISTOR	UN2212		
		< RESISTOR >			
R2	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R9	1-216-073-00	METAL CHIP	10K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-295-00	SHORT	0		
R12	1-216-097-00	RES, CHIP	100K	5%	1/10W
R13	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-073-00	METAL CHIP	10K	5%	1/10W
R15	1-216-081-00	METAL CHIP	22K	5%	1/10W
R16	1-216-049-11	RES, CHIP	1K	5%	1/10W
R17	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R18	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R19	1-216-049-11	RES, CHIP	1K	5%	1/10W
R20	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R21	1-216-049-11	METAL CHIP	1K	5%	1/10W
R22	1-216-081-00	METAL CHIP	22K	5%	1/10W
R23	1-216-025-00	RES, CHIP	100	5%	1/10W
R24	1-216-025-00	RES, CHIP	100	5%	1/10W
R25	1-216-081-00	METAL CHIP	22K	5%	1/10W
R26	1-216-081-00	METAL CHIP	22K	5%	1/10W
R27	1-216-081-00	METAL CHIP	22K	5%	1/10W
R28	1-216-037-00	METAL CHIP	330	5%	1/10W
R30	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R32	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R33	1-216-089-00	RES, CHIP	47K	5%	1/10W
R35	1-216-089-00	RES, CHIP	47K	5%	1/10W
R36	1-216-089-00	RES, CHIP	47K	5%	1/10W
R37	1-216-085-00	METAL CHIP	33K	5%	1/10W
R72	1-216-033-00	METAL CHIP	220	5%	1/10W (German)
R72	1-216-065-00	RES, CHIP	4.7K	5%	1/10W (AEP, UK)
R73	1-216-081-00	METAL CHIP	22K	5%	1/10W (AEP, UK)
R73	1-216-097-00	RES, CHIP	100K	5%	1/10W (German)
R74	1-216-081-00	METAL CHIP	22K	5%	1/10W (AEP, UK)
R74	1-216-097-00	RES, CHIP	100K	5%	1/10W (German)
R75	1-216-033-00	METAL CHIP	220	5%	1/10W (German)
R75	1-216-065-00	RES, CHIP	4.7K	5%	1/10W (AEP, UK)
R76	1-216-089-00	RES, CHIP	47K	5%	1/10W
R81	1-216-073-00	METAL CHIP	10K	5%	1/10W
R82	1-216-073-00	METAL CHIP	10K	5%	1/10W
R90	1-216-089-00	RES, CHIP	47K	5%	1/10W
R100	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R101	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R102	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R103	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R104	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R105	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R106	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R109	1-216-190-00	RES, CHIP	470	5%	1/8W
R110	1-216-089-00	RES, CHIP	47K	5%	1/10W
R111	1-216-089-00	RES, CHIP	47K	5%	1/10W
R112	1-216-089-00	RES, CHIP	47K	5%	1/10W
R113	1-216-089-00	RES, CHIP	47K	5%	1/10W
R114	1-216-089-00	RES, CHIP	47K	5%	1/10W
R115	1-216-089-00	RES, CHIP	47K	5%	1/10W
R116	1-216-073-00	METAL CHIP	10K	5%	1/10W
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
R200	1-216-073-00	METAL CHIP	10K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-075-00	RES, CHIP	12K	5%	1/10W
R204	1-216-075-00	RES, CHIP	12K	5%	1/10W
R205	1-216-073-00	METAL CHIP	10K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W
R208	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R209	1-216-073-00	METAL CHIP	10K	5%	1/10W
R210	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R211	1-216-086-00	RES, CHIP	36K	5%	1/10W
R212	1-216-082-00	RES, CHIP	24K	5%	1/10W
R213	1-216-082-00	RES, CHIP	24K	5%	1/10W
R214	1-216-086-00	RES, CHIP	36K	5%	1/10W
R215	1-216-033-00	METAL CHIP	220	5%	1/10W
R216	1-216-033-00	METAL CHIP	220	5%	1/10W
R217	1-216-081-00	METAL CHIP	22K	5%	1/10W
R218	1-216-081-00	METAL CHIP	22K	5%	1/10W
R219	1-216-049-11	RES, CHIP	1K	5%	1/10W
R220	1-216-049-11	RES, CHIP	1K	5%	1/10W
R229	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R230	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R231	1-216-081-00	METAL CHIP	22K	5%	1/10W
R232	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R233	1-216-821-11	METAL CHIP	1K	5%	1/16W
R234	1-216-079-00	METAL CHIP	18K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R235	1-216-033-00	METAL CHIP	220	5%	1/10W
R236	1-216-081-00	METAL CHIP	22K	5%	1/10W
R240	1-216-097-00	RES, CHIP	100K	5%	1/10W
R241	1-216-077-00	METAL CHIP	15K	5%	1/10W
R251	1-216-295-00	SHORT	0		
R252	1-216-081-00	METAL CHIP	22K	5%	1/10W
R253	1-216-081-00	METAL CHIP	22K	5%	1/10W
R300	1-216-073-00	METAL CHIP	10K	5%	1/10W
R301	1-216-073-00	METAL CHIP	10K	5%	1/10W
R302	1-216-073-00	METAL CHIP	10K	5%	1/10W
R303	1-216-075-00	RES, CHIP	12K	5%	1/10W
R304	1-216-075-00	RES, CHIP	12K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R309	1-216-073-00	METAL CHIP	10K	5%	1/10W
R310	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R311	1-216-086-00	RES, CHIP	36K	5%	1/10W
R312	1-216-082-00	RES, CHIP	24K	5%	1/10W
R313	1-216-082-00	RES, CHIP	24K	5%	1/10W
R314	1-216-086-00	RES, CHIP	36K	5%	1/10W
R315	1-216-033-00	METAL CHIP	220	5%	1/10W
R316	1-216-033-00	METAL CHIP	220	5%	1/10W
R317	1-216-081-00	METAL CHIP	22K	5%	1/10W
R318	1-216-081-00	METAL CHIP	22K	5%	1/10W
R319	1-216-049-11	RES, CHIP	1K	5%	1/10W
R320	1-216-049-11	RES, CHIP	1K	5%	1/10W
R329	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R330	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R331	1-216-081-00	METAL CHIP	22K	5%	1/10W
R332	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R333	1-216-821-11	METAL CHIP	1K	5%	1/16W
R334	1-216-079-00	METAL CHIP	18K	5%	1/10W
R335	1-216-033-00	METAL CHIP	220	5%	1/10W
R336	1-216-081-00	METAL CHIP	22K	5%	1/10W
R340	1-216-097-00	RES, CHIP	100K	5%	1/10W
R341	1-216-077-00	METAL CHIP	15K	5%	1/10W
R352	1-216-081-00	METAL CHIP	22K	5%	1/10W
R353	1-216-081-00	METAL CHIP	22K	5%	1/10W
R356	1-216-295-00	SHORT	0		
R400	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R401	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R402	1-216-101-00	RES, CHIP	150K	5%	1/10W
R403	1-216-085-00	METAL CHIP	33K	5%	1/10W
R404	1-216-049-11	RES, CHIP	1K	5%	1/10W
R405	1-216-049-11	RES, CHIP	1K	5%	1/10W
R406	1-216-049-11	RES, CHIP	1K	5%	1/10W
R407	1-216-833-11	METAL CHIP	10K	5%	1/16W
R408	1-216-833-11	METAL CHIP	10K	5%	1/16W
R409	1-216-833-11	METAL CHIP	10K	5%	1/16W
R445	1-216-073-00	METAL CHIP	10K	5%	1/10W
R446	1-216-073-00	METAL CHIP	10K	5%	1/10W
R500	1-216-097-00	RES, CHIP	100K	5%	1/10W
R501	1-216-049-11	RES, CHIP	1K	5%	1/10W
R502	1-216-841-11	RES, CHIP	47K	5%	1/16W
R507	1-216-077-00	METAL CHIP	15K	5%	1/10W
R508	1-216-089-00	RES, CHIP	47K	5%	1/10W
R509	1-216-073-00	METAL CHIP	10K	5%	1/10W
R510	1-216-097-00	RES, CHIP	100K	5%	1/10W
R511	1-216-194-00	METAL CHIP	680	5%	1/8W
R513	1-216-073-00	METAL CHIP	10K	5%	1/10W
R514	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R515	1-216-097-00	RES, CHIP	100K	5%	1/10W
R516	1-216-041-00	METAL CHIP	470	5%	1/10W
R517	1-216-025-00	RES, CHIP	100	5%	1/10W
R518	1-216-025-00	RES, CHIP	100	5%	1/10W
R529	1-216-833-11	METAL CHIP	10K	5%	1/16W
R530	1-216-833-11	METAL CHIP	10K	5%	1/16W
R531	1-216-839-11	METAL CHIP	33K	5%	1/16W
R532	1-216-845-11	METAL CHIP	100K	5%	1/16W
R533	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R534	1-216-001-00	METAL CHIP	10	5%	1/10W
R535	1-216-158-00	RES, CHIP	22	5%	1/8W
R536	1-216-158-00	RES, CHIP	22	5%	1/8W
R537	1-216-095-00	METAL CHIP	82K	5%	1/10W
R538	1-216-097-00	RES, CHIP	100K	5%	1/10W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-194-00	METAL CHIP	680	5%	1/8W
R541	1-216-194-00	METAL CHIP	680	5%	1/8W
R542	1-216-089-00	RES, CHIP	47K	5%	1/10W
R543	1-216-085-00	METAL CHIP	33K	5%	1/10W
R548	1-216-033-00	METAL CHIP	220	5%	1/10W
R549	1-216-033-00	METAL CHIP	220	5%	1/10W
R550	1-216-033-00	METAL CHIP	220	5%	1/10W
R552	1-216-033-00	METAL CHIP	220	5%	1/10W
R553	1-216-033-00	METAL CHIP	220	5%	1/10W
R554	1-216-033-00	METAL CHIP	220	5%	1/10W
R561	1-216-024-00	RES, CHIP	91	5%	1/10W
R562	1-216-089-00	RES, CHIP	47K	5%	1/10W
R564	1-208-462-41	RES, CHIP	10K	2%	1/10W
R565	1-208-462-41	RES, CHIP	10K	2%	1/10W
R566	1-218-871-11	RES, CHIP	10K	2%	1/16W
R567	1-218-871-11	RES, CHIP	10K	2%	1/16W
R568	1-216-845-11	METAL CHIP	100K	5%	1/16W
R569	1-216-845-11	METAL CHIP	100K	5%	1/16W
R570	1-216-206-00	RES, CHIP	2.2K	5%	1/8W
R571	1-216-073-00	METAL CHIP	10K	5%	1/10W
R572	1-216-089-00	RES, CHIP	47K	5%	1/10W
R573	1-216-089-00	RES, CHIP	47K	5%	1/10W
R574	1-216-081-00	METAL CHIP	22K	5%	1/10W
R575	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R576	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R577	1-216-073-00	METAL CHIP	10K	5%	1/10W
R578	1-216-089-00	RES, CHIP	47K	5%	1/10W
R579	1-216-089-00	RES, CHIP	47K	5%	1/10W
R580	1-216-081-00	METAL CHIP	22K	5%	1/10W
R581	1-216-097-00	RES, CHIP	100K	5%	1/10W
R582	1-216-049-11	RES, CHIP	1K	5%	1/10W
R583	1-216-049-11	RES, CHIP	1K	5%	1/10W
R584	1-216-097-00	RES, CHIP	100K	5%	1/10W
R585	1-216-025-00	RES, CHIP	100	5%	1/10W
R587	1-216-017-00	RES, CHIP	47	5%	1/10W
R588	1-216-073-00	METAL CHIP	10K	5%	1/10W
R589	1-216-025-00	RES, CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R590	1-216-025-00	RES, CHIP	100	5%	1/10W
R591	1-216-089-00	RES, CHIP	47K	5%	1/10W
R592	1-216-097-00	RES, CHIP	100K	5%	1/10W
R593	1-216-049-11	RES, CHIP	1K	5%	1/10W
R594	1-216-097-00	RES, CHIP	100K	5%	1/10W
R595	1-216-097-00	RES, CHIP	100K	5%	1/10W
R596	1-216-097-00	RES, CHIP	100K	5%	1/10W
R597	1-216-097-00	RES, CHIP	100K	5%	1/10W
R602	1-216-049-11	RES, CHIP	1K	5%	1/10W
R603	1-216-025-00	RES, CHIP	100	5%	1/10W
R605	1-216-025-00	RES, CHIP	100	5%	1/10W
R606	1-216-097-00	RES, CHIP	100K	5%	1/10W
R608	1-216-025-00	RES, CHIP	100	5%	1/10W
R609	1-216-025-00	RES, CHIP	100	5%	1/10W
R610	1-216-049-11	RES, CHIP	1K	5%	1/10W
R611	1-216-049-11	RES, CHIP	1K	5%	1/10W
R612	1-216-049-11	RES, CHIP	1K	5%	1/10W
R613	1-216-049-11	RES, CHIP	1K	5%	1/10W
R614	1-216-049-11	RES, CHIP	1K	5%	1/10W
R615	1-216-049-11	RES, CHIP	1K	5%	1/10W
R616	1-216-097-00	RES, CHIP	100K	5%	1/10W
R617	1-216-097-00	RES, CHIP	100K	5%	1/10W
R618	1-216-097-00	RES, CHIP	100K	5%	1/10W
R619	1-216-049-11	RES, CHIP	1K	5%	1/10W
R620	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R621	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R623	1-216-097-00	RES, CHIP	100K	5%	1/10W
R624	1-216-097-00	RES, CHIP	100K	5%	1/10W
R625	1-216-049-11	RES, CHIP	1K	5%	1/10W
R626	1-216-049-11	RES, CHIP	1K	5%	1/10W
R629	1-216-206-00	RES, CHIP	2.2K	5%	1/8W
R630	1-216-206-00	RES, CHIP	2.2K	5%	1/8W
R631	1-216-073-00	METAL CHIP	10K	5%	1/10W
R632	1-216-049-11	RES, CHIP	1K	5%	1/10W
R633	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R701	1-216-113-00	METAL CHIP	470K	5%	1/10W
R702	1-216-049-11	RES, CHIP	1K	5%	1/10W
R703	1-216-041-00	METAL CHIP	470	5%	1/10W
R704	1-216-035-00	METAL CHIP	270	5%	1/10W
R705	1-216-035-00	METAL CHIP	270	5%	1/10W
R706	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R707	1-216-097-00	RES, CHIP	100K	5%	1/10W
R708	1-216-049-11	RES, CHIP	1K	5%	1/10W
R709	1-216-001-00	METAL CHIP	10	5%	1/10W
R710	1-216-097-00	RES, CHIP	100K	5%	1/10W
R711	1-216-097-00	RES, CHIP	100K	5%	1/10W
R712	1-216-097-00	RES, CHIP	100K	5%	1/10W
R713	1-216-089-00	RES, CHIP	47K	5%	1/10W
R714	1-216-105-00	RES, CHIP	220K	5%	1/10W
R715	1-216-025-00	RES, CHIP	100	5%	1/10W
R717	1-216-049-11	RES, CHIP	1K	5%	1/10W
R718	1-216-089-00	RES, CHIP	47K	5%	1/10W
R719	1-216-097-00	RES, CHIP	100K	5%	1/10W
R720	1-216-073-00	METAL CHIP	10K	5%	1/10W
R721	1-216-073-00	METAL CHIP	10K	5%	1/10W
R722	1-216-089-00	RES, CHIP	47K	5%	1/10W
R723	1-216-097-00	RES, CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R724	1-216-097-00	RES, CHIP	100K	5%	1/10W
R725	1-216-097-00	RES, CHIP	100K	5%	1/10W
R726	1-216-097-00	RES, CHIP	100K	5%	1/10W
R727	1-216-097-00	RES, CHIP	100K	5%	1/10W
R728	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R729	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R730	1-216-295-00	SHORT	0		
R731	1-216-295-00	SHORT	0		
R732	1-216-049-11	METAL CHIP	1K	5%	1/10W
R733	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< NETWORK RESISTOR >			
RB501	1-233-810-21	RES, NETWORK 100K (3216)			
RB502	1-233-810-21	RES, NETWORK 100K (3216)			
RB503	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
RB504	1-233-810-21	RES, NETWORK 100K (3216)			
RB505	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
RB506	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
		< VARIABLE RESISTOR >			
RV1	1-238-718-11	RES, ADJ, METAL GLAZE 470K			
		< SWITCH >			
SW500	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
SW503	1-571-754-31	SWITCH, PUSH (1 KEY)(NOSE DETECT)			
		< TRANSFORMER >			
T501	1-431-831-11	TRANSFORMER, OSCILLATION (EL)			
		< TUNER >			
TU1	A-3282-045-A	TUNER UNIT TUX-012 (E)			
		< VIBRATOR >			
X1	1-577-126-61	VIBRATOR, CRYSTAL (7.2MHz)			
X500	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)			
X501	1-579-886-21	VIBRATOR, CRYSTAL (32kHz)			
X701	1-781-084-21	VIBRATOR, CRYSTAL (4.332MHz)			
X702	1-760-096-11	VIBRATOR, CRYSTAL (4.19MHz)			
**********					
*	A-3317-122-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-104-543-11	FILM CHIP	0.0022uF	5%	50V
C102	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C201	1-104-543-11	FILM CHIP	0.0022uF	5%	50V
C202	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

SERVO

Ref. No.	Part No.	Description			Remark
C304	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C310	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C311	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C315	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C318	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C319	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C321	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C325	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C326	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C327	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C328	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C329	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C334	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C335	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C341	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C348	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C349	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C350	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C351	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C358	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C359	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C361	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C362	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C506	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C510	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C514	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN101	1-779-389-21	HOUSING, CONNECTOR (PC BOARD) 30P			
CN102	1-573-929-11	CONNECTOR, FFC/FPC (ZIF) 20P			
CN103	1-764-439-21	CONNECTOR, FPC 11P			
		< DIODE >			
D401	8-719-157-93	DIODE RD3.0SB2			
D501	8-719-988-62	DIODE 1SS355			
		< FERRITE BEAD >			
FB301	1-414-235-11	INDUCTOR CHIP 0uH			
FB302	1-414-385-11	INDUCTOR CHIP 0uH			
		< IC >			
IC101	8-759-456-13	IC PCM1718E-T1			
IC301	8-752-384-47	IC CXD2652AR			
IC302	8-752-074-77	IC CXA2523R			
IC303	8-759-430-25	IC BH6511FS-E2			
IC304	8-759-096-87	IC TC7WU04FU (TE12R)			
IC305	8-759-040-83	IC BA6287F			
IC306	8-759-058-62	IC TC7S08FU (TE85R)			
IC307	8-759-498-44	IC MSM51V4400-70TS-K			
IC401	8-759-909-71	IC BA4558F			
IC501	8-752-898-83	IC CXP84340-201Q			
IC502	8-759-238-47	IC TC74HCT7007AF (EL)			
IC503	8-759-238-47	IC TC74HCT7007AF (EL)			
		< COIL >			
L101	1-412-058-11	INDUCTOR CHIP 10uH			
L102	1-412-058-11	INDUCTOR CHIP 10uH			
L301	1-412-058-11	INDUCTOR CHIP 10uH			
L302	1-412-058-11	INDUCTOR CHIP 10uH			
L303	1-412-039-51	INDUCTOR CHIP 100uH			
L304	1-412-039-51	INDUCTOR CHIP 100uH			
L305	1-412-039-51	INDUCTOR CHIP 100uH			
L306	1-412-039-51	INDUCTOR CHIP 100uH			
L501	1-412-058-11	INDUCTOR CHIP 10uH			
		< TRANSISTOR >			
Q301	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q302	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q401	8-729-920-85	TRANSISTOR 2SD1664-QR			
Q402	8-729-106-60	TRANSISTOR 2SB1115A			
Q403	8-729-421-22	TRANSISTOR UN2211			
		< RESISTOR >			
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R104	1-216-049-11	RES, CHIP	1K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-049-11	RES, CHIP	1K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/16W
R302	1-216-809-11	METAL CHIP	100	5%	1/16W
R303	1-216-809-11	METAL CHIP	100	5%	1/16W
R304	1-216-809-11	METAL CHIP	100	5%	1/16W
R305	1-216-809-11	METAL CHIP	100	5%	1/16W
R306	1-216-809-11	METAL CHIP	100	5%	1/16W
R307	1-216-809-11	METAL CHIP	100	5%	1/16W
R308	1-216-809-11	METAL CHIP	100	5%	1/16W
R311	1-216-821-11	METAL CHIP	1K	5%	1/16W
R312	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R316	1-216-821-11	METAL CHIP	1K	5%	1/16W
R317	1-216-809-11	METAL CHIP	100	5%	1/16W
R318	1-216-833-11	METAL CHIP	10K	5%	1/16W
R319	1-216-845-11	METAL CHIP	100K	5%	1/16W
R320	1-216-855-11	METAL CHIP	680K	5%	1/16W
R324	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R325	1-216-821-11	METAL CHIP	1K	5%	1/16W
R327	1-216-821-11	METAL CHIP	1K	5%	1/16W
R328	1-216-811-11	METAL CHIP	150	5%	1/16W
R329	1-216-819-11	METAL CHIP	680	5%	1/16W
R330	1-216-853-11	METAL CHIP	470K	5%	1/16W
R331	1-216-809-11	METAL CHIP	100	5%	1/16W
R332	1-216-809-11	METAL CHIP	100	5%	1/16W
R333	1-216-819-11	METAL CHIP	680	5%	1/16W
R334	1-216-809-11	METAL CHIP	100	5%	1/16W
R335	1-216-815-11	METAL CHIP	330	5%	1/16W
R336	1-216-853-11	METAL CHIP	470K	5%	1/16W
R337	1-216-853-11	METAL CHIP	470K	5%	1/16W
R338	1-216-833-11	METAL CHIP	10K	5%	1/16W
R339	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R340	1-216-843-11	METAL CHIP	68K	5%	1/16W
R341	1-216-837-11	METAL CHIP	22K	5%	1/16W
R342	1-216-833-11	METAL CHIP	10K	5%	1/16W
R343	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R344	1-216-833-11	METAL CHIP	10K	5%	1/16W
R345	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R346	1-216-841-11	METAL CHIP	47K	5%	1/16W
R347	1-216-833-11	METAL CHIP	10K	5%	1/16W
R348	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R349	1-216-025-00	RES, CHIP	100	5%	1/10W
R350	1-216-142-00	RES, CHIP	4.7	5%	1/8W
R351	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R352	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R353	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R354	1-216-857-11	METAL CHIP	1M	5%	1/16W
R355	1-216-833-11	METAL CHIP	10K	5%	1/16W
R356	1-216-833-11	METAL CHIP	10K	5%	1/16W
R357	1-216-017-00	RES, CHIP	47	5%	1/10W
R401	1-216-073-00	METAL CHIP	10K	5%	1/10W
R402	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R403	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R405	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R406	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W
R501	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-216-821-11	METAL CHIP	1K	5%	1/16W
R504	1-216-821-11	METAL CHIP	1K	5%	1/16W
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W
R506	1-216-845-11	METAL CHIP	100K	5%	1/16W
R507	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R510	1-216-845-11	METAL CHIP	100K	5%	1/16W
R511	1-216-847-11	METAL CHIP	150K	5%	1/16W
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-809-11	METAL CHIP	100	5%	1/16W
R518	1-216-809-11	METAL CHIP	100	5%	1/16W
R519	1-216-809-11	METAL CHIP	100	5%	1/16W
R520	1-216-809-11	METAL CHIP	100	5%	1/16W
R521	1-216-809-11	METAL CHIP	100	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W
R524	1-216-821-11	METAL CHIP	1K	5%	1/16W
R525	1-216-845-11	METAL CHIP	100K	5%	1/16W
R526	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R527	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R528	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R530	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R531	1-216-845-11	METAL CHIP	100K	5%	1/16W
R532	1-216-864-11	METAL CHIP	0	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R536	1-216-864-11	METAL CHIP	0	5%	1/16W
R537	1-216-809-11	METAL CHIP	100	5%	1/16W
R538	1-216-845-11	METAL CHIP	100K	5%	1/16W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W
R545	1-216-864-11	METAL CHIP	0	5%	1/16W
		< NETWORK RESISTOR >			
RB301	1-233-576-11	RES, CHIP NETWORK 100			
RB302	1-233-576-11	RES, CHIP NETWORK 100			
RB503	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
		< THERMISTOR >			
TH501	1-810-421-11	THERMISTOR NTH5G36B103K01TE			
		< VIBRATOR >			
X301	1-767-429-21	VIBRATOR, CRYSTAL (22.5792MHz)			
X501	1-760-365-11	VIBRATOR, CERAMIC (10MHz)			
**********					
*	1-671-080-11	SUB TRANSLATION BOARD			
		**********			
		< CONNECTOR >			
CN701	1-779-170-11	SOCKET, CONNECTOR 20P			
CN702	1-779-169-11	SOCKET, CONNECTOR 18P			

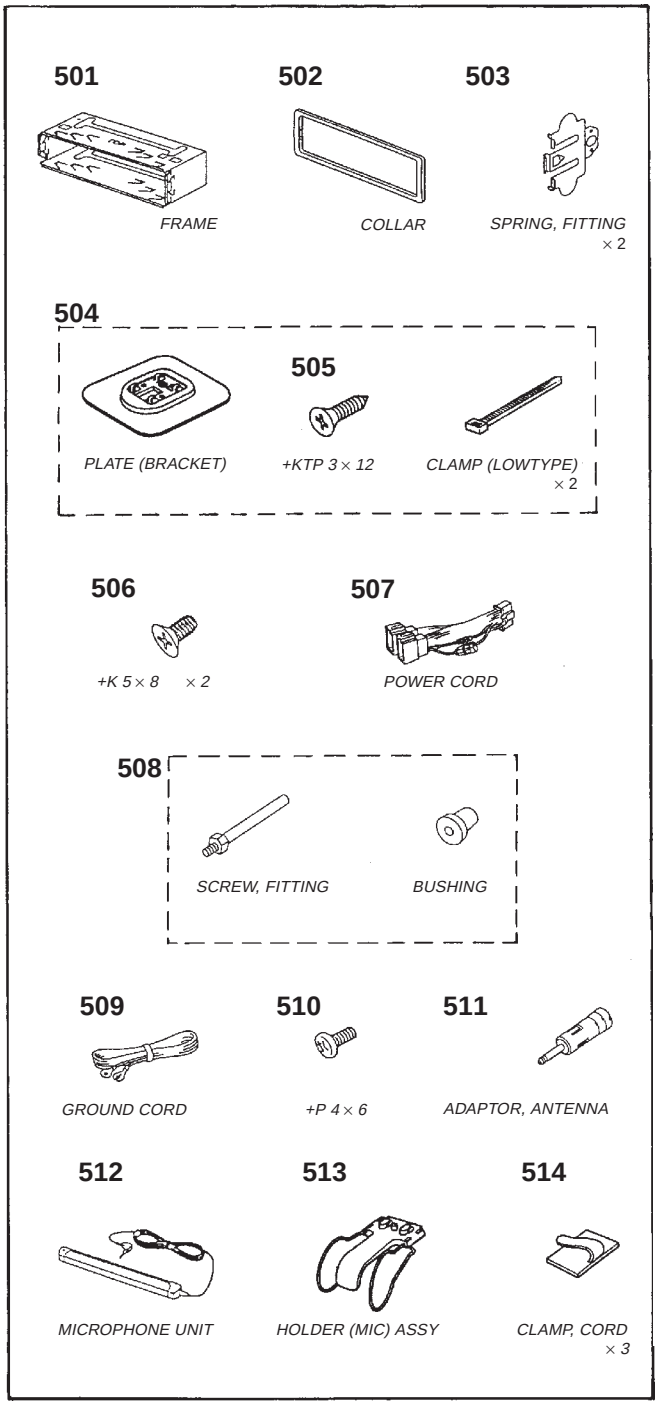
SUB TRANSLATION | SUPER CAPACITOR

Ref. No.	Part No.	Description	Remark
		< LED >	
LED701	8-719-051-01	LED CL-170HR-CD-T (TIR)	
LED702	8-719-064-72	LED BG1101F-10-TR (ILLUMINATION)	
LED703	8-719-038-07	LED CL-190PG-CD-T (⏏)	
		< SWITCH >	
LSW701	1-762-619-21	SWITCH, KEY BOARD (WITH LED)(⏏)	
		< RESISTOR >	
R701	1-216-033-00	METAL CHIP 220 5% 1/10W	
		< SWITCH >	
SW701	1-572-921-11	SWITCH, KEY BOARD (RESET)	
**********			
*	1-671-897-11	SUPER CAPACITOR BOARD	
		**********	
		< CAPACITOR >	
C1000	1-125-404-00	DOUBLE LAYER 0.47F	5.5V
		< CONNECTOR >	
* CN1000	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
**********			
		MISCELLANEOUS	
		**********	
24	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
26	1-783-862-41	CORD (WITH CONNECTOR) (RCA) (FRONT AUDIO OUT, BUS AUDIO IN)	
27	1-783-862-31	CORD (WITH CONNECTOR) (RCA) (REAR AUDIO OUT, SUB WOOFER OUT)	
31	1-475-982-11	MICROPHONE UNIT	
151	1-654-693-11	SENSOR FLEXIBLE BOARD	
⚠169	8-583-046-05	OPTICAL PICK-UP KMS-241B/J2RP	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-20	SCREW +B 2X5	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#4	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#5	7-685-851-04	SCREW +BVTT 2X4 (S)	
#6	7-624-102-04	STOP RING 1.5, TYPE -E	
#7	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE3	
#8	7-621-772-08	SCREW +B 2X3	
#9	7-621-555-10	SCREW +K 2X3	
#10	7-627-554-07	SCREW, PRECISION +P 2X2.2	
#11	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
**********			

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-475-951-11	REMOTE COMMANDER (RM-X4V)	
	3-023-882-01	LABEL (V M) (for RM-X4V)	
	3-864-032-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-864-032-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP)	
	3-864-032-31	MANUAL, INSTRUCTION (GERMAN) (German)	
	3-864-033-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-864-033-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP, German)	
	3-864-429-11	MANUAL, INSTRUCTION, INSTALL (for MICROPHONE UNIT AND RM-X4V) (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-864-429-21	MANUAL, INSTRUCTION, INSTALL (for MICROPHONE UNIT AND RM-X4V) (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP, German)	
	X-3373-926-1	CASE ASSY (XR) (for FRONT PANEL)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark



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